Clinical Lectures
ON
CASES OF INTRA-THORACIC PRESSURE.

Delivered at King's College Hospital,

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LECTURE II. — PART III.

HAVING called your attention to these four illustrative cases, all of which you have had the opportunity of seeing, I shall now, by way of conclusion, offer a few additional observations on the subject of intra-thoracic pressure generally.

In the first place, I need scarcely say that although these cases, coming under our notice about the same time, have served excellently well the purpose of directing our minds to the consideration of this subject from a general point of view, yet neither of them can be regarded, by itself, as presenting a typical case of intra-thoracic pressure, nor do they all of them by any means present us with an exhaustive view of all the phenomena which may arise in connexion with compression of the various structures within the thorax. In the clinical course and history, for instance, of *malignant* intra-thoracic growths, we have usually a much more stormy and serious picture of a distressing form of disease than that presented by either of the three last cases I have narrated to you; although in each of these there was a period when the symptoms were sufficiently serious to arouse the gravest apprehensions. I have on more than one occasion placed on record the serious and interesting phenomena which we have seen manifested in fatal cases of malignant cancerous intra-thoracic growths which have come under my own care in this hospital.[1] These cases usually run a rapidly fatal course. Some of you may remember one such case in which the right bronchus became compressed by a cancerous growth, which finally perforated its wall, and grew into and obstructed its cavity, thus leading to collapse of the lung, and a remarkable displacement of the heart to the right side of the chest, with emphysematous dilatation of the opposite lung. In another case, where the growth was of a similar nature, we had a group of symptoms presented to us which at first sight bore a striking resemblance to those of subacute phthisis, and in which the use of the laryngoscope enabled us early to detect compression of the left recurrent laryngeal nerve, and to establish a diagnosis of intra-thoracic tumour. But I have no intention here of entering again into the clinical histories of these cases. I wish, however, to ask you to return with me for a few minutes to the consideration of the important part played by enlargement of the bronchial glands in the production of the phenomena of intra-thoracic pressure. I am of course speaking now of true glandular hypertrophy, and not of the origin of malignant growths in these glands, or of their accidental implication in them, nor of the enlargement of these glands as a part of that general affection of the ymphatic system which is called lymphadenoma. As I have already remarked, enlargement of the bronchial glands, as a part of the tuberculous cachexia, is a common affection amongst children, and its clinical features have been admirably described by Drs. Rilliet and Barthez in their "Treatise on Diseases of Children"; but, except as a complication of other intra-thoracic disease, I believe the affection is a somewhat rare one in adults. It occurs, however, frequently enough to render it highly necessary that we should not leave it out of consideration when we are investigating the mode of origin of symptoms of intra-thoracic pressure in any case that may come before us. Post-mortem examination has shown that these glands may attain a considerable size, either from simple overgrowth of the lymphatic elements, or from tuberculous or other infiltrations. They have frequently been found, in children, forming aggregated masses the size of a hen's egg, and of still larger size in the adult.

The symptoms which should lead us to suspect the existence of enlargement of the bronchial glands are these: A person in whom we can discover no very evident exciting cause complains of a dry cough, occurring in paroxysms, attended often with dyspnœa, also aggravated paroxysmally, and accompanied with a long-drawn sibilant inspiration. There is frequently some alteration of the voice as well; it may be harsh and hoarse, or low and whispering, or cracked and unsteady. There is usually little or no expectoration unless bronchial catarrh has been excited as a complication, as is not seldom the case. Occasionally small hæmoptyses may occur. Often there is marked and persistent flushing of the face. I have noticed this in two or three cases. I have also been struck by the presence of a symptom which has been observed and recorded by others—viz., the existence of great sensitiveness on percussion over the base of the sternum, under the clavicles, and between the scapulæ. In one case the sensitiveness to percussion (which always produced a paroxysm of coughing) was so considerable that chloroform had to be administered before we could thoroughly investigate the physical signs.

In the case of children we may frequently be assisted in our diagnosis by the coexistence of scrofulous glandular enlargements in the neck or in the axilla. Should the air-passages be compressed by the enlarged glands, then during each inspiration we may observe considerable depression of the supra-sternal and supra-clavicular fossæ, and even, in some cases, of the upper intercostal spaces, as was the case in the young girl with caries of the cervical vertebræ whose history I have given you.

Are there any reliable signs of this malady furnished by percussion and auscultation? I think there is important corroborative evidence to be thus obtained; but, as I have already hinted, I am not disposed to give so much weight to the symptoms elicited by percussion as Dr. Noel Guéneau de Mussy is, who has given a very full and able account of this affection.[2] This eminent physician maintains that he is able, by percussion over the spinous processes of the upper dorsal vertebræ, to determine exactly the spot where the trachea bifurcates, as well as the extent of its course in front of the spine. This may be possible in thin persons, but I do not think it is so in all cases. If the glands that lie along either side of the trachea are enlarged, he maintains that on the same side of the spines of the four upper dorsal vertebræ we may distinguish, on percussion, a diminished resonance, a heightening of tone, increased resistance, and diminished elasticity; and if the glands that lie in the fork of the trachea, at its bifurcation, are enlarged, an abnormal dull sound on percussion can be perceived below the fourth dorsal spinous process. I must repeat, however, that, except in thin persons, I cannot myself believe that this is a region which yields much reliable information on percussion.

A better and surer criterion is percussion over the first piece of the sternum, where we may find a diminution of resonance on one or other side of the bone, extending perhaps to the region of the sterno-clavicular articulation and to the first intercostal space and the cartilage of the second rib. The auscultatory signs of enlargement of the bronchial glands, very well described by Dr. Guéneau de Mussy, are these: over one side of the first piece of the sternum (i. e., the side affected), and over the adjacent costal cartilages and corresponding intercostal spaces, you may notice, in some cases very distinctly, that the breathing, compared with the opposite side, has a bronchial, or even a tracheal, blowing character; the enlarged bronchial glands conducting the bronchial or tracheal breath-sounds to the surface. Behind, similarly, in the vertebro-scapular region, you may hear *bronchial* breathing much more marked on one side than the other; and this sign is all the more important if it occurs on the *left* side, for you are aware that the right bronchus normally yields a louder sound during respiration, and especially during expiration, than the left. The sounds heard during speaking and coughing are also modified on the affected side, the vocal resonance is increased, and the cough often has a peculiar echoing, resonant character.

As the air-tubes may become compressed by the enlarged glands, and the bronchial mucous membrane in this region may become swollen and catarrhal, various other modifica-

[1] THE LANCET, Nov. 18th, 1876.

[2] Clinique Médicale, vol. i., 1874.

tions of the breath-sounds may be heard on auscultation, their chief diagnostic value being based on the fact that they are all traceable to one point of greatest intensity where they may be presumed to originate, and whence they are conducted along the air-passages. Sometimes we hear with inspiration a loud sonorous rhonchus, accompanied occasionally, as in the first case I brought before you, with a distinctly perceptible tactile vibration over the compressed bronchus. The bronchial breath-sound is usually harsh and grating, and now and then a sound like that of suction may be heard with the inspiration, as of air drawn through a narrowed tube. The expiration is generally prolonged and exaggerated. An occasional large moist râle may be heard at the end of inspiration or expiration. The constant occurrence of this râle at one particular spot was pointed out long ago by Messrs. Rilliet and Barthez as an important sign of this disease.

It is important you should bear in mind that a rhonchus proceeding from compression of the trachea is conducted along the bronchi of both lungs, and is therefore heard on both sides of the chest, whereas a rhonchus originating in one or other main bronchus is only heard on the same side. When the compression of the bronchus is considerable we may find the vesicular breath-sound on that side greatly enfeebled, and sometimes completely obliterated. If the bronchial glands attain a great size, naturally the evidences of intra-thoracic pressure become quite obvious, and unless the history of the case enables us to decide, it may be at first difficult to determine whether we have to do with an intra-thoracic growth of a malignant nature, or a case of simple glandular hypertrophy—i. e., of so-called *adénopathie bronchique*.

I must not omit to inform you of the relation which some physicians believe to exist between enlargement of the bronchial glands and whooping-cough. It has been stated by competent observers, and there seems no reason to doubt its truth, that enlargement of the bronchial glands is not only a common accompaniment of whooping-cough, but that it is also not infrequent in measles and in typhoid fever, giving rise to characteristic phenomena recognisable by auscultation and percussion. But it is especially in the symptoms and course of whooping-cough that these physicians think they are able to discern the influence of enlargement of the bronchial glands. In support of this view they call attention to the striking resemblance of the paroxysmal cough, with its long-drawn sibilant inspiration, in *adénopathie bronchique* with the well-known cough of pertussis, in both cases often ending in vomiting; and they see in these phenomena a morbid excitation, direct or reflex, of the pneumogastric nerve, referable to the enlarged glands. It is chiefly, however, with respect to the chronic forms of whooping-cough that their argument appears to have most weight. Here is, they say, an acute and highly contagious malady, which, wholly unlike other acute contagious diseases, runs at times a course so protracted that its characteristic symptoms may continue even for two or three years—a fact which they believe to be due to a persistent concomitant tumefaction of the bronchial glands. I need not insist on the practical importance of this observation should further investigation tend to establish its truth.

We have seen that the phenomena of intra-thoracic pressure may arise from a variety of causes—from simple hyperplasia of the bronchial or mediastinal lymphatic glands; from tumours originating in the lymphatic glands and having a structure identical with that of these glands, but acquiring such enormous size and being so frequently generally diffused that the disease assumes the aspect and characters of malignancy, such as the so-called lymphadenomata; from malignant growths, carcinomatous or sarcomatous, of which medullary carcinoma is perhaps the most common; and most frequent of all from thoracic aneurisms. It would be easy to give you an exhaustive list of all the possible causes of intra-thoracic pressure, but a clinical lecture is not a systematic treatise, and I may more profitably occupy the remainder of the time at my disposal by putting before you a few practical remarks on the question of the diagnosis, the prognosis, and the treatment of these cases.

An attentive consideration of the characteristic symptoms we have seen developed in the cases I have introduced to your notice, and a reference to the introductory remarks of my first lecture, will render it unnecessary for me to dwell again on the symptoms observed in such maladies, but I will mention briefly two or three points in connexion with diagnosis.

In the first place, how can we distinguish whether symptoms of intra-thoracic pressure are due to the existence of a solid new growth within the thorax, or to the presence of aneurism? The distinction is often very difficult, especially when the compressing agent is situated deep in the chest. We may, however, be assisted to a correct diagnosis by the consideration of many collateral circumstances. The occurrence of severe pain, especially referred to the back, is much more common in the case of aneurism than in the early stage of new growths. When a new growth is accompanied by pain the pain is usually retrosternal; it is felt behind the upper third of the sternum, and it is a fixed, not a radiating pain, and is attended with a sense of constriction. The male sex, the absence of marked cachexia, the presence of cardiac hypertrophy, of atheromatous disease in the superficial vessels, or a history of the complaint following immediately on a severe strain,—all or any of these circumstances might throw light on the diagnosis, and determine our opinion in favour of aneurism. On the other hand, the female sex, the presence of a decided cachexia, the existence of enlarged superficial glands, the absence of cardiac hypertrophy and of general atheroma, a scrofulous or cancerous family history, might each or all help us to the opposite conclusion.

It is unnecessary that I should mention the more obvious physical signs upon which we rely for the diagnosis of aneurism. There is one point, however, in the physical examination of these cases which I believe you will sometimes find of diagnostic value, and that is the seat and the outline of the superficial area of dulness. In the case of solid growths these are very irregular; while in the case of aneurisms the outline of dulness is most commonly circular, merging often inferiorly into the area of cardiac dulness, while its situation is usually either at the base of the heart or along the course of the aorta or its large branches.

A rapidly progressive course from the commencement, a steady increase in the severity of the symptoms, in spite of all treatment, would also afford presumption, in the absence of more positive evidence, of the presence of a malignant growth rather than of aneurism. Cases of aneurism do, however, occasionally run the same kind of rapidly progressive course; while, on the other hand, cases of new growth within the thorax have been observed which have been preceded for two or three years by symptoms of slight oppression, occasional palpitations, and more or less cough. Bulging and erosion of the bony wall of the chest is more common in aneurism than in solid tumours, while in the latter the sense of resistance and loss of elasticity are greater.

A careful and exhaustive survey of all the circumstances of the case, historical as well as clinical, will rarely fail to enable you to arrive at a correct conclusion. There are, however, exceptional instances in which it is best to withhold a positive opinion.

The distinction between malignant and non-malignant growths is not so difficult. In the former case the rapidity of the growth is of chief importance, as well as the steadily and rapidly increasing severity of the symptoms, one symptom of pressure after another becoming quickly established. The rapid supervention of œdema is one of these, for œdema is usually the result of rapid compression or complete, or almost complete, obliteration of a large venous trunk. When pressure on such a trunk is gradually and slowly developed, and when it stops short of complete obliteration, venous anastomoses are extensively set up, sufficient to maintain the circulation through collateral channels; and although we get great distension of superficial veins, we do not get œdema. Here, again, I need not dwell on the more obvious diagnostic points, the absence or presence of cachexia, &c. The sagacity of our prognosis must, of course, depend on the correctness of our diagnosis. When we are satisfied of the existence of a malignant cancerous growth within the chest, our prognosis must, of course, be altogether unfavourable; or if we are convinced that the growth belongs to the lymphadenomata, we know that recovery is equally hopeless; simple glandular overgrowths, and growths of suspected syphilitic origin, admit of a much more hopeful prognosis. The history of the three last of the four cases I have brought before you should make us cautious in giving altogether unfavourable prognoses, even in cases which may at first sight seem almost hopeless. And this leads me to say a few words on the matter of treatment.

In the first place, it is impossible to overrate the value of simple *rest in bed* in some of these cases. This is, of itself, sufficient in many instances to calm the more distressing symptoms; and when it is the large venous trunks that chiefly suffer compression, we place the organs of circulation under the most favourable circumstances for regaining their balance and for establishing a collateral circulation. Nothing could be more striking than the benefit which was derived from this simple expedient in my fourth case; and the benefit was by no means merely temporary, for it has continued ever since. Now, if we had submitted this patient to any decided treatment from the first, such as large doses of iodide of potassium for instance, we should have run great risk of deceiving ourselves as to the influence of this remedy. But, in all cases, or nearly all, of intra-thoracic pressure—I say, in nearly all, for there are exceptions, chiefly in certain cases of aneurism, where the patients find their symptoms much aggravated by enforced repose—but in nearly all, rest in bed is almost immediately followed by an amelioration of the severity of the symptoms. A combination of sedatives and antispasmodics will generally be found of great value in allaying the distressing symptoms of nerve irritation often present in these cases—the paroxysmal dyspnœa, the cough, the vomiting, and the pain. A mixture of morphine with ether and ammonia is most serviceable; a few doses often having the effect of changing the whole picture of the malady. Unhappily, the change, in the majority of cases, is only temporary. For the relief of local nerve pains the mixed belladonna and chloroform liniments prove very efficacious. Hypodermic injections of morphine and atropine are most valuable resources, and the inhalation of chloroform is often attended with good effect. In cases where we have any reason to suspect that constitutional syphilis may be a causal agent, we should give large doses of iodide of potassium, with or without mercury, for some time; and one may every now and then have the satisfaction of seeing, as in my second case, a rapid and complete disappearance of the distressing symptoms.

In those cases of enlargement of the bronchial glands to which I have incidentally called your attention, much may be effected by judicious treatment. Change of air is one of the most potent remedies—from inland to the seaside, or from low level districts to high mountain regions. Removal to the seaside, together with warm or cold sea-baths, is of great value. Cod-liver oil, the syrup of the iodide of iron, the local application of the tincture of iodine between the scapulæ and over the superior sternal and supra-clavicular regions, are all means of well-known efficacy. Small doses of arsenic, especially in the form of the Eau de Bonrboule, is very highly spoken of by French writers. This excellent water, which is not so well known as it ought to be in this country, where fashion still runs in favour of German rather than French waters, is given in doses of a wine-glassful three times a day, with an equal quantity of milk.

I have, gentlemen, in these two lectures, been chiefly concerned in calling your attention to the clinical aspects of cases of intra-thoracic pressure; it is needless that I should say how full these cases are of questions of pathological interest, an interest which, I trust, will be all the greater for you from the fact of your having become, to some extent, acquainted with their clinical history.

BEQUESTS ETC. TO MEDICAL CHARITIES.—The Preston and County of Lancaster Royal Infirmary has become entitled to £1000 under the will of Mr. John Blackledge, of Clayton-le-Moors. The Glasgow Royal Infirmary has received £500 under the will of Mr. William Mann. The Rev. Benjamin Parsons Symons, D.D., bequeathed £500 to the Radcliffe Infirmary, Oxford, and £100 to the Bridgewater Infirmary. Mr. Samuel Alexander Bell, of Snaresbrook, bequeathed £500 to the Royal Ophthalmic Hospital. Mr. F. Dyer Edwardes has given £319 (additional) to the new building for the Chelsea Hospital for Women. Mr. David Ramsden has given £1000 to the Halifax Infirmary. The Norfolk and Norwich Hospital has received £224 under the will of Mr. Richard Griffin. Miss Maria Pringle has left £200 to the National Institution for the Blind of Ireland, £400 to the Infirmary, Bangor, and £300 to each of the following:—viz., Home for Crippled Children, Bray; Deaf and Dumb Institution, Claremount; Hospital for Incurables, Donnybrook; St. Mark's Ophthalmic Hospital, and the Adelaide Hospital, Dublin.

ABSTRACT
OF A
Clinical Lecture
ON
PLASTER-OF-PARIS SPLINTS FOR FRACTURES OF THE LEG.

Delivered at St. Thomas's Hospital.

BY JOHN CROFT, F.R.C.S.,
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GENTLEMEN,—For more than two years I have been using at this hospital plaster-of-Paris splints for all simple and for most compound fractures of the lower extremity. The apparatus consists of—first, inside and outside splints made of common house-flannel and plaster-of-Paris; and, secondly, of muslin bandages. The splints for fractures below the knee are shaped somewhat like the old short outside splint. The foot-piece is, however, wider. The splint for the inside of the leg is similar in length and width to that for the outside. The splints should be long enough to extend from the tubercle of the tibia to the middle of the metatarsus, and together they should be in width about one inch less than the circumference of the limb at the corresponding part. A rough guide to the shape of the splint may be found in the injured person's stocking when it is laid flat on a table. Each splint is constructed of two layers of the flannel. The outer layer carries the gypsum. The inner layer forms a dry, warm, elastic lining, and protects the skin. These splints are applied by means of the muslin bandages. The bandage is put on like any other, from the toes to the knee. One thickness is enough. Two bandages of five or six yards in length are more convenient than one of ten or twelve yards.

To make the splints.—1. A piece of house-flannel or an old thin shrunk blanket, or any suitable substitute, is selected. The pieces may be shaped by measurement, taking the circumference of the limb below the knee, at the biggest part of the calf, just above the ankle-joint, from the front of the ankle-joint round the heel to the front again, and at the middle of the metatarsus. The flannel of each splint should be in width half an inch less than half the circumference at any of those points. The width of the two splints should be one inch less than the circumference of the limb at any corresponding part. It should be long enough to extend from the tubercle of the tibia to the middle of the metatarsus. Four pieces are required—two for each splint. 2. Two bandages of common muslin are prepared, each five to six yards long and two inches and a half in width. 3. About a handful of good dry plaster is mixed with water to the consistence of thick cream. 4. The inside pieces of flannel may be laid on the table or bed, the outer surface being upwards. 5. The outside pieces are to be soaked in the plaster separately, and laid out on their respective inside pieces.

Application.—Whilst traction is kept up, and the ends of the broken bones are maintained in apposition, the splints are to be applied and smoothed; then the bandage is to be put on. Traction is to be maintained during the hardening of the plaster. The latter takes place in about three minutes. Next the limb should be laid on a large soft pillow, the toes directed upwards, and the knee a little bent. In the application of the bandage great caution should be observed that it is not drawn tightly anywhere, and that no one turn of the bandage is tighter than another. The support is to be equal everywhere. The two splints should not meet by about half an inch either down the front or back. The intervals are spanned by the dry porous muslin; at the sides the bandage is fixed to the splints by the plaster, which oozes into it from the outer layer of flannel. If it become necessary next day, or later, to ease the splints, or to inspect the limb at any spot, the bandage can be slit up with scissors along the middle line in front. One or both of the splints can then be eased from the limb, and readjusted by the addition of another bandage. It is undesirable to wholly remove the splints. They are hinged together at the back

by the muslin bandage which spans the interval there. The trimming of the apparatus may be done as soon as the plaster shall have hardened. Should the surgeon be short-handed with regard to assistance, he may apply the outside splint first, and lightly bandage that on; and, when that splint has nearly hardened, he may put on the inside one. As swelling subsides, and the splints become more or less loose, an additional bandage should be put on.

At the end of ten days, if the patient is convalescing, the outside bandage may be gummed, or a fresh gummed-bandage rolled on. That apparatus will last until splints are no longer needed. At the end of a fortnight, or three weeks, as the case may be, the patient may leave the hospital for his own home.

This mode of treatment is admirably adapted to oblique fractures, accompanied by displacement of the tibia, to cases of Pott's fracture, and to comminuted fractures.

Immediate use of the apparatus.—The splints are to be put on when the surgeon is first called to the case. Swelling from contusion and subcutaneous laceration, uncomplicated with lesion of the vascular trunks, is not an objection to the immediate application of the apparatus. On the contrary, the support and enforced rest have a beneficial influence in controlling swelling and its consequent pain.

Covering the seat of fracture by bandage and splint.—I had never observed that any benefit had been derived from the old practice of leaving those parts exposed. On the contrary, I had thought that the swelling and vesication were aggravated by the omission to support those parts. I have experienced only good results from covering the parts. If the fracture has not been properly reduced, the compression of the skin by the bone and splint will probably cause a slough. My remarks apply to those cases in which the bones have been properly coapted. In these cases the pain is relieved, and the swelling is modified, by the equable support afforded by the splints and bandages. I have not hesitated to resort to them two and five days after the receipt of the injury, when swelling, and, indeed, vesication, had already occurred. I may particularly refer to two cases of Pott's fracture, in which the dislocation had not been thoroughly reduced. Those cases were dressed a week ago to-day, and are now under observation. In one of them the skin over the inner malleolus was already turning black. In the other the leg was swollen, red, and vesicated. The deformities were reduced and the fractures were set whilst the patients were under the influence of ether, and the plaster splints were fitted on, to the great comfort and welfare of the sufferers. The limbs had been previously treated on Liston's back splint.

I would here insist on the relief and other advantages which ensue when thoroughly equable light support is afforded to a broken limb. It assists to make and it maintains extension, it prevents the recurrence of dislocation, and it obviates the irregular spasmodic muscular movements which occur to an imperfectly supported broken limb. The old short inside and outside splints do not afford these advantages. The limb is unevenly squeezed between the two unyielding concave pieces of wood, or between one splint and a bandage. Similarly, when the limb is bandaged into Liston's back splint, it suffers compression between the two appliances. These splints are also not well adapted to maintain extension.

Plaster-of-Paris bandages.—These are capable of ensuring all the desiderata, but I do not employ them for the following reasons: first, that an inexperienced bandager may create uneven pressure by drawing one turn of the bandage tighter than another, or by crowding on the bandage and plaster more thickly at one part; secondly, that, if the bandage is to be taken off, the whole thickness of the plaster and bandage must be tediously cut through; thirdly, that the bandage must be reapplied as a whole, and the limb therefore subjected to loss of support, remanipulation, and probably resetting.

The *lateral* splints, hinged together by muslin, present none, or as few as possible, of these risks and disadvantages. The softness and elasticity of the flannel obviate the risk from uneven bandaging, and the span of soft muslin between the front edges of the splints can be easily cut down with ordinary scissors, as I have already pointed out.

The nearest approach to the excellence of these splints is found in what is known as the "Bavarian" splint. It is, however, less easy to maintain efficient extension during the fixation of the latter splint than it is to do so during the same process with regard to the lateral splints; but the more serious objection is in the fact that the "Bavarian" splint must be taken off for the purpose of trimming. That step entails upon the patient remanipulation, perhaps re-setting, and its attendant pains.

Starch, water-glass, glue, gummed and other fixed bandages.—These all have the objection that their drying, hardening, or stiffening are slow processes. Plaster of Paris hardens in about three minutes, less or more. Splints of this material possess as much durability as can be required, especially when they have been protected by the addition of a gummed bandage.

When the patient is convalescent, but still needs some support from splints, the side-splints can be taken off and trimmed, eyelet holes can be inserted along the front edges, and the splints can be laid on or removed at will. If the patient be restless, or become the subject of delirium tremens, the fractured limb, secure in its all-but-complete case, may be swung in the ordinary suspensory apparatus, or may even be left free to be jerked about without much, if any harm. Fractures near the knee-joint, and fractures of any part of the shaft of the femur, have been successfully treated with the aid of this apparatus. The pain just above the heel, which so commonly plagues a patient whose leg has been imbedded in a Liston's back splint, is never complained of by those whose fractures are put up in these plaster splints.

Adaptability to country and private practice.—These splints are characterised by their simplicity, stability, and economy, and therefore commend themselves strongly to the country practitioner. Instead of wooden or metallic splints, which may or may not fit, the surgeon can take out with him, to his case, a bag of plaster of Paris and the muslin bandages, and perhaps the flannel. The plaster, which should be good, but need not be the very best, must be dry, and therefore should be kept, when in store, in a dry warm place. House-flannel does not appear to require "shrinking." The surgeon should be cautious in using any flannel which has not been in some way shrunk. Ordinary new flannel might shrink on the limb, and fail to yield to the swelling.

LARGE CARTILAGINOUS TUMOUR OF THE LOWER MAXILLA; REMOVAL WITH HALF OF THE JAW; RECOVERY.

BY GEORGE LAWSON, F.R.C.S.,
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THE following case of tumour of the lower jaw, which has been under my care at the Establishment for Invalid Ladies, is one of special interest, first from its large size, its position, and the peculiar structure of its growth; and, secondly, from the lady having been the last patient upon whom the late Sir William Fergusson operated in private.

The history of the case goes back to 1865, when she first came under Sir William Fergusson's care on account of a large tumour, bulging below the jaw, and pushing into the mouth. He then removed the tumour, and at the same time took away five teeth from the lower maxilla, which appear to have been displaced by it. She made an excellent recovery, and for a time remained well, but the tumour recurred, and after two or three years was again removed by Sir William Fergusson. Unfortunately the patient had kept no account of the dates of the different operations she had undergone. She was only able to say that she was operated on twice between the years 1865 and 1872, and three times between 1872 and 1876; the last operation being in November, 1876, when Sir William apparently succeeded in getting away the whole of the growth.

On December 26th, 1877, the patient, aged fifty-seven, a stout healthy-looking woman, was admitted into the Establishment for Invalid Ladies for the purpose of having the tumour again removed. Since the last operation the tumour had recurred, and, as she could not have the benefit of Sir William Fergusson's assistance, she had allowed the growth to remain until it had attained such dimensions that she was compelled to seek relief.

On admission, the tumour presented the external appearance shown in the woodcut (Fig. 1). It extended upwards to the level of the lower part of the ear, downwards in the neck to within two fingers'-breadth of the clavicle, and forwards it was bulging close up to the nose. Looking within

FIG. 1.

the mouth, the tumour was seen to occupy the greater portion of that cavity; and it extended across the pharynx against which and the soft palate it pressed. The mouth could be closed, and she could take food without much difficulty, but her breathing was at times troublesome, and especially at night. Sir James Paget and Mr. Bowman kindly saw the patient with me, and both agreed in advising an operation.

On Jan. 7th, 1878, the patient having been placed under chloroform by Mr. Stewart, I proceeded to remove the tumour, assisted by Sir James Paget, Mr. Clark, and Mr. Stewart, jun. The mouth being opened and fixed by a gag, a ligature was passed through the tongue and handed over to Mr. Stewart, jun., who kept the tongue well drawn forwards during the whole of the operation. An incision was then made from the lower border of the ear around the

FIG. 2.

Portion of the lower jaw, with the tumour growing from the periosteum on its inner surface.

greater circumference of the tumour to the centre of the lower lip, which was divided. The flap of skin was raised from the tumour and thrown across the face; the lower part of the tumour was then freed from its connexion with the neck, and the lower jaw sawn through with a chain saw at the symphysis. I again divided the jaw a little below the coronoid process, as I felt it would be safer to disarticulate after the bulk of the tumour was removed, for if the internal maxillary artery were torn during the disarticulation, I could then secure it more readily. Finding that the tumour was firmly wedged above the soft palate, I cut through the upper portion of it, and then without much difficulty removed the great mass which is represented in the woodcut (Fig. 2). I afterwards disarticulated the portion of the jaw which was left, and took away the remainder of the tumour. The only vessel which bled severely was the internal maxillary, and this was easily secured. The flap of skin was then replaced and kept in position with harelip pins at the mouth and sutures in the other portion. A fold of lint wet with a lotion of carbolic acid, of the strength of 1 to 100, was then laid over the wound and held *in situ* with a few turns of bandage. The patient was placed in bed with the head well raised, and the ligature in the tongue was left to enable the nurse to draw the tongue forward if it should by chance slip backwards and cause any difficulty in breathing. Towards evening a subcutaneous injection of morphia was given.

Jan. 8th.—The patient passed a fair night, sleeping at intervals. Pulse 112; temperature 102°. The ligature in the tongue was removed. During the night an enema of beef-tea, egg, and brandy, was given, but it was only partially retained; and this was again administered in the morning. During the afternoon the patient was able to swallow a little milk, and from this time she took fluid nourishment by the mouth.

9th.—Progressing favourably. Takes her nourishment well. A small portion of the skin at the lower part of the flap is discoloured, and is evidently going to slough.

From this date the patient continued to do well. A small portion of the edge of the flap sloughed, but the rest of the wound united throughout the greater part of its extent by primary union.

On the 20th of January (thirteen days after the operation) she was able to get up, and she left the home on Feb. 14th. The wound was then completely closed, with the exception of one small spot near the lower border.

Examination of the tumour.—The tumour weighed close upon eighteen ounces. It was of a firm consistence, but easily cut with the knife. It was intimately connected with the periosteum on the inner side of the lower jaw, from which it apparently sprang. A portion of the tumour was given to Dr. Thin immediately after its removal, who kindly gave me the following report of his microscopical examination:—"I examined microscopically the portion of the tumour kindly given me by Mr. Lawson, and I believe the growth to be a chondrome of the class named by Cornil and Ranvier chondromes hyalins lobulés. It has the peculiarity that the cartilaginous tissue is of a very low type, so much so that the determination of the exact nature of the growth was a matter of some difficulty. Successful preparations, however, show that, except in the degree of development of the cartilaginous substance proper, the structure is identical with that described by pathologists as characteristic of these tumours."

Dr. Coupland, the lecturer on Pathology at the Middlesex Hospital, examined the specimen of the growth prepared by Dr. Thin, and concurred in the report.

CASE OF CEREBRO-SPINAL FEVER, FATAL BY RUPTURE OF SPLEEN.

BY T. J. MACLAGAN, M.D.,
PHYSICIAN TO THE DUNDEE ROYAL INFIRMARY; EXAMINER IN MEDICINE TO THE UNIVERSITY OF ABERDEEN.

DURING the past winter a good many cases of cerebro-spinal fever (epidemic cerebro-spinal meningitis) have been admitted into the wards of the Dundee Infirmary. Their chief distinguishing characteristics have been marked febrile symptoms, in combination with (1) either the absence of eruption or the presence of a roseolar rash, disappearing on pressure, not elevated above the level of the surrounding skin, often varying in intensity from day to day, and sometimes completely disappearing before the commencement of defervescence;

(2) the occasional occurrence of true hæmorrhagic spots on the skin; (3) intense pain in head, and often, too, pains in spine, sides, chest, and limbs; (4) frequently marked hyperæsthesia of skin. Sometimes the head was more affected than the spine; in others the spinal symptoms predominated. The latter were those in which neuralgic pains in the trunk and limbs were most troublesome. In them the intellect was generally quite clear throughout the attack. In cases in which the cerebral symptoms were most marked the general aspect and condition of the patient often closely resembled that of a sufferer from typhus.

In cases examined after death there was invariably found distinct evidence of inflammation of the membranes of the nervous centres, generally in the form of lymphy and fluid effusion into the arachnoid, with more or less intense injection of the minute vessels of the pia mater. These I shall more fully describe on another occasion; meantime I make these prefatory remarks in order to show that there can be no doubt as to the nature of the ailment with which we had to deal in the following case:—

Mrs. B——, aged forty-seven, a widow, had a daughter in the hospital suffering from well-marked cerebro-spinal fever. On the 24th of February, 1878, she herself was seized with shivering, sickness, pain in the head, back, and "all over." The symptoms continued, and she was admitted into hospital on the 1st of March.

March 1st (evening).—Complains of pain in the head, and general aching of bones. Is quite sensible; expression natural; sclerotics clear, pupils natural in size and action; cheeks flushed; tongue moist, and furred in the centre; bowels constipated; has considerable thirst; pulse 116; temperature 101·8°; respiration 28.

2nd (seventh day).—Quiet night. Bowels moved by medicine, stool natural; tongue moist; eyes suffused. Complains of pain in head, back, and limbs; answers questions intelligently. On the skin of the cheeks, chin, and upper part of the throat is a bright roseolar rash, the spots of which vary in size, disappear on pressure, and are not elevated. No eruption at any other part. Chest normal. Area of splenic dulness somewhat increased. Urine high-coloured, specific gravity 1018, deficient in chlorides, contains a considerable quantity of albumen. (Absence of albumen in the urine has been the exception in the outbreak to which this case belongs.) Pulse 108, of fair volume and strength; temperature 102·4°; respiration 26. To have milk and beef-tea, and water *ad libitum*. Evening: Pulse 112; temperature 103·4°; respiration 28.

3rd.—Passed a quiet night. Is quite intelligent, but restless, and aching all over; tongue moist and dirty; eyes suffused; roseolar rash gone from face; has no eruption anywhere; skin of trunk hyperæsthetic. No action of bowels. Pulse 108; temperature 102·4°; respiration 24.—Evening: Pulse 112; temperature 102·8°; respiration 24.

4th.—During the night the patient was restless and distressed, but had no definite complaint. Early this morning the nurse, noticing that she was very restless and that her appearance had changed for the worse, sent for Dr. McCosh, the resident superintendent. At 7 A.M. he found her cold, pale, pulseless, and evidently sinking. There was no diarrhœa, and no apparent cause for so sudden a change. Stimulants were freely administered, but in spite of all that could be done she sank, and died at 9 A.M.

Necropsy, twenty-four hours after death.—Slight rigor mortis. Post-mortem lividity of back from shoulders to hips. No other mark, discoloration, or spot on skin. Muscles soft and dull in colour.—Chest: Heart soft, flaccid, and paler than natural; lungs normal.—On opening the abdomen the peritoneal cavity was found to contain a large quantity of dark blood, partly liquid and partly coagulated. The cavity of the pelvis was filled by a large, soft, and very dark clot. There was no evidence of peritonitis, and no greater increase of fluid than could be explained by the presence of so large a quantity of blood. The liver was of a mahogany-brown colour, was very soft, and readily broke down under the finger, the broken surface presenting a granular aspect; it was larger than natural, weighing 59 oz. The spleen, slightly increased in size, was ruptured on its anterior and convex aspect. Its substance was soft, diffluent, and of a mahogany colour. Resting on its convex surface was a dark clot having the exact form and configuration of the spleen. This clot had evidently formed beneath the capsule before the latter had given way, for a detached piece of the capsule, about an inch square, lay on the convex surface of the clot, its concave surface fitting closely to the natural convexity of the spleen. The kidneys were darker in colour than natural, but were otherwise normal. The abdominal glands were not enlarged. Peyer's patches, and the intestinal glands generally, were quite healthy in appearance.—Head: No marked venous congestion; slightly increased quantity of cerebro-spinal fluid. The minute vessels of the pia mater covering the outer surface of the cerebral and cerebellar lobes were abnormally distinct and red, and the membrane itself more than usually adherent to the brain-substance. Besides this minute injection there was scattered over the cerebral surface a slight milky haziness, consequent on lymphy effusion into the arachnoid. This haziness was more or less patchy, and was most distinct along the course of the vessels. There was no increase of fluid in the ventricles, and no increased vascularity of the cerebral or cerebellar substance. The veins in the spinal cavity were fuller than natural, and there was increased vascularity of the membranes of the cervical and lumbar portions of the cord. No abnormality of the cord itself.

The above details leave no doubt that Mrs. B—— died of cerebro-spinal fever. There are only three other ailments which it could possibly have been—typhus fever, typhoid fever, or relapsing fever.

Against its being typhus, there is the evidence of her symptoms during life, and the local inflammatory affection of the cerebro-spinal membranes noted after death. There was no petechial rash, such as occurs in typhus, but a scanty and transient roseolar rash, such as is often seen in cerebro-spinal fever. True it is that typhus *sine eruptione* does occur, but it is in the highest degree improbable that so exceptional an occurrence (Murchison puts it at less than 3 per cent.) should be noted in a succession of cases; and Mrs. B——'s case was one of five which came from the same locality, and one of two or three dozen which all presented the same symptoms, which were admitted one after the other in quick succession, and in not one of which was the petechial rash of typhus found. That even five cases of typhus *sine eruptione* should occur one after another is so highly improbable that this alone may be accepted as proving that we had not to deal with typhus fever. In addition, we have the evidence of the post-mortem appearances of cerebro-spinal fever. There was localised minute bright injection of the pia mater, and effusion into the arachnoid, and not the general venous congestion which characterises typhus.

That it was not typhoid fever is demonstrated by the healthy state of the intestinal glands.

That it was not relapsing fever is equally demonstrated by the presence of the local affection of the pia mater, and by the fact that other cases having the same symptoms, and coming from the same locality, and even the same room, got quite well without having a relapse. Moreover, relapsing fever does not exist in Dundee, and has not done so for years.

That Mrs. B—— died of cerebro-spinal fever there is no doubt. The interest of the case centres in the mode of fatal termination. Rupture of the spleen as the result of injury is common. Spontaneous rupture of the spleen scarcely ever occurs in this country except in acute specific fevers, accompanied by softening of that organ, and even in them it is extremely rare. In the many post-mortem examinations which I have made of fatal cases of typhus and typhoid fever, I never once met with it. Murchison seems never to have met with it in his own practice, and refers to only one case of typhus and three of relapsing fever in which the accident is reported to have occurred. Rokitansky refers to it as occurring in typhoid fever. Except the case which I now report, I know of no instance in which it ever occurred in cerebro-spinal fever.

The case is recorded, not only because of its rarity, but because the occurrence in cerebro-spinal fever of so much softening of the spleen forms an important link in the chain of evidence by which we are led to class this malady among the specific fevers. The case serves also to show how guarded our prognosis should be even in cases in which everything seems to be going on most favourably. Up to within a few hours of death—i.e., up to the time at which the splenic substance gave way, there was no special cause for anxiety in this case. Though the post-mortem evidence of the nature of the disease was distinct enough in the membranes of the

brain and cord, there was not enough local mischief to cause death. Indeed, the affection of the nervous centres had nothing to do with the fatal result, which was entirely due to rupture of the spleen, an accident which could not possibly have been foreseen or guarded against.

Dundee.

A CASE OF

DISTAL LIGATURE OF THE CAROTID AND SUBCLAVIAN ARTERIES FOR ANEURISM OF THE ARTERIA INNOMINATA AND AORTA.

By KELBURNE KING, F.R.C.S.,
SURGEON TO THE HULL GENERAL INFIRMARY.

EDWARD C——, aged thirty-seven, was admitted into the Hull Infirmary on the 16th October, 1876, in consequence of a pulsating tumour at the right side of the root of the neck. He had been a soldier, having served six years in India; had suffered from syphilis, and had been a great spirit-drinker. He had felt occasional pain in the back before he went to India, but on the whole he enjoyed good health there. On his return to England he frequently complained of pain caused by the pressure of his knapsack. In spite of this, he was able to perform his duties (though he had considerable difficulty in so doing) from the year 1871 till 1874, when he was compelled to resort to surgical treatment. In that year he was admitted to the Hull Workhouse, where Mr. Dix, surgeon to that institution, compressed the right carotid artery by means of a wire compress. Considerable relief followed the operation for a time, but getting gradually worse, he consulted me in October, 1876, and was sent into the infirmary, as before mentioned.

His general symptoms were a constant irritating cough, severe pains shooting upwards from the pulsating tumour to the back of the head, and running down to the back part of the right shoulder. There was no affection of the voice, no difficulty in swallowing, nor, when at rest, had he any dyspnœa. On examining the root of the neck there was found a distinct pulsating tumour extending above the right sterno-clavicular articulation. The pulsations of the right carotid and subclavian arteries were full and distinct, rather more so than is natural; the former vessel was perfectly pervious; the pulse in the right wrist was natural, but that on the left side was very much diminished in force. Beneath the pulsating tumour of the neck there was decided dulness over a space about three inches in length, from the centre of the manubrium of the sternum outwards beneath the internal portion of the clavicle, and about an inch and a half in breadth. Throughout the whole of this space there was a loud bruit, which diminished in intensity as the distance from the tumour increased, and which disappeared altogether as the region of the heart was approached. The heart-sounds were healthy. From these symptoms, and more especially from the fact of there being a space clear, both on percussion and auscultation, between the aneurismal sounds and the base of the heart, I concluded that this was a case of aneurism of the innominate artery. Absolute rest, unstimulating diet, and large doses of iodide of potass, were prescribed, but no relief to his symptoms was procured. Indeed, his sufferings increased so much that he was most anxious that anything which might afford a chance of relief should be done for him, his reckless nature making him impatient of pain and indifferent to risk.

Under these circumstances, I took into consideration the only operation applicable to this case—that of distal ligature of the common carotid and third portion of the subclavian. Of nine recorded cases, I found that one case (Fean's) survived four months; one (Heath's) survived four years; one (Hutchinson's, of Brooklyn) recovered from the operation, but died of suffocation on the fourth day; and one (Sand's, of New York) recovered from the operation, but the disease was not cured; the remaining five cases terminated fatally. The operation was performed by double consecutive ligature in three and by simultaneous ligature in six of these cases. Two of the former and three of the latter died from the effects of the operation. The balance was therefore in favour of the simultaneous ligature; but in this case, on account of the forcible pulsation in each of the arteries, I would have preferred this mode of operating, from fear of extension of the disease into the artery left unligatured.

Accordingly on Dec. 9th, 1876, I placed a catgut ligature on the common carotid, and another on the third portion of the subclavian. The operations were performed antiseptically. I have nothing to remark regarding them, except that the ligature of the carotid was more tedious than usual, in consequence of the matting together of the tissues caused by the former operation of compression; and that, in taking up the subclavian, I noticed the small vein running in front of and across the artery, to which Mr. Maunder[1] calls attention. The ligature was placed round the carotid first, but not tightened until after the subclavian was exposed, so that the stoppage of the arterial flow in both vessels was as nearly as possible simultaneous. The ends of the ligatures were left hanging out of the wounds, which were dressed with carbolic gauze. Professor M'Kendrick, of Glasgow, who happened to be present, observed a slight spasm pass over the patient's features when the ligatures were tightened; but there was no cerebral disturbance after he recovered from the effects of the chloroform; nor, indeed, had he any symptom indicating the important nature of the change which his circulatory system had undergone. On Dec. 14th the parts of the ligatures external to the wounds dropped off, and on the 18th both wounds had healed. From the first the pain was greatly relieved, and gradually disappeared entirely. The pulse at the right wrist became discernible, but feeble, a week after the operation. Pulsation was felt at the bifurcation of the right external and internal carotids three days after, and it was soon apparent that free anastomosis between the right and left external carotids had taken place. The pulse at the left wrist, whose feebleness I had attributed to pressure in some way made by the aneurism on the left subclavian, did not improve after the operation. The pulsating tumour in the neck soon began to feel firmer, gave considerably less impulse to the fingers, and extended over a smaller area. But the most marked improvement was in the general symptoms. The pain and cough gradually diminished, and finally disappeared entirely.

For some weeks the patient submitted to restraint; then he became fractious in temper, impatient, and insubordinate. He ultimately made up his mind to leave the house, insisting that he felt better than he had done for many years, and his purpose could not be changed by any remonstrance. Accordingly he was dismissed, or, rather, he dismissed himself, on the 24th February, 1877.

On Feb. 27th he again presented himself at the hospital. During the interval he had been in a state of constant intoxication. He felt miserably ill, and there was greatly increased pulsation along the region of the carotid, with redness of the skin and distension of the adjacent parts.

On March 27th an abscess opened at the seat of the lower part of the scar of the wound over the carotid. This was followed by hæmorrhage, which, recurring frequently, wore him out, and he died on the 30th March, one hundred and eleven days after the operation.

Permission was with difficulty obtained to make a partial examination of the body. We were, however, enabled to remove the heart, the affected vessels to beyond the ligatures, and the whole of the thoracic aorta. Besides the aneurism of the innominata, there was found a large thoracic aneurism extending nearly to the termination of the thoracic aorta, consisting mainly of dilatation of the coats, but adhering firmly to the bodies of the dorsal vertebræ, of which the sixth and seventh were denuded of their periosteum and formed part of the sac. The whole length of the innominate artery was in an aneurismal condition, and its interior was occupied by a firm fibrinous clot, which extended as far as the ligatures on the carotid and subclavian arteries. Jutting out from the root of this innominate aneurism was an appendage or diverticulum passing to the front of the carotid and communicating with the remains of the abscess of the neck. It was from this that hæmorrhage took place, and to it therefore was to be attributed the fatal result.

The explanation of the deficiency in the left pulse afforded by the post-mortem examination is one of the most interesting features of the case. About an inch above its origin the calibre of the artery was found to be reduced, by internal deposition, to an opening barely sufficient to admit a probe, so that the supply of blood to the head and both arms was,

[1] Surgery of the Arteries, p. 30.

after the tightening of the ligatures, very nearly limited to that conveyed by the left carotid and by the branches given off by the first part of the right subclavian.

The history of this case proves, with those to which I have alluded, and cases subsequently treated by Mr. Barwell, that even where the disease is so extensive the distal operation very greatly alleviates the symptoms, and, when the patient is moderately careful, may indefinitely prolong life.

Hull.

ON THE TREATMENT OF PHTHISIS AT DAVOS AM PLATZ.

BY DR. CLIFFORD ALLBUTT.

IN the autumn of last year I published the impressions I received from a visit paid to Davos am Platz in the Grisons in the preceding summer.[1] As the time for the summer residence is rapidly approaching, it seems desirable that I should state the results of my experience of Davos during the past winter, and add any words of advice which are likely to be useful to persons who intend to visit Davos in the coming season.

In my former paper I gave some account of the situation and climate of Davos, and of the curative work I saw in progress there. I did not hesitate to say that the results there obtained, especially in phthisis, seemed to me to be far in advance of those secured at any other health-resort, and I ventured to suggest an interpretation of the results apparently obtained. For many years I have held that the majority of phthisical patients die of septicæmia, and that the arrest of this daily repoisoning is a primary object of treatment. To reach, cleanse, and dress ulcers of the lungs by surgical methods seems impossible, and the effects of antiseptic inhalations are disappointing; if, however, there be an antiseptic climate, we may hope to counteract this secondary blood-poisoning by sending our patients to live in it. Such antiseptic or aseptic climates are found in Switzerland, in Upper Egypt, and in other districts; and in the mountain air of Switzerland there is found also a tonic virtue which no doubt largely aids the physician in his work. The aseptic state of the air on alpine heights has been proved by Professor Tyndall's experiments at the Bel Alp; but the Bel Alp, in common with most other alpine resorts, is insufficiently sheltered. In Davos alone, so far as we yet know, is found an air at once aseptic, bracing, and still. Upon these points I must refer the reader to my former paper. Very few English invalids have as yet found their way to Davos, and observations based upon the cases of English invalids are therefore not many. During the past winter my friend Dr. Rüdi has treated nineteen cases among the English; some of these were patients of my own, and others had been seen by me. Dr. Rüdi has kindly sent me notes of all. Of these nineteen, nine were cases of pulmonary disease.[2] Shortly put, they fared as follows:—

CASE 1.—Arrived on August 6th, 1877. Large cavity in upper lobe of left lung below the clavicle, infiltration of the whole lobe, and moist râles all over the left lung. Ordered to keep quiet, sit out in the fresh air, take abundant food and milk, and wine twice daily. Soon strength was restored, perspirations ceased, fever ceased, and appetite returned. At the end of December came on an attack of bronchitis in the whole left lung and renewed fever; this attack lasted four weeks. Recovery was satisfactory; respiration in the lower lobe became normal, and the cavity almost ceased to secrete. The surrounding tissue is still infiltrated, but shows no sign of irritation. The cavity is contracting. Next winter it will close. Although this patient has to return to Davos good progress was made; for on arrival the disease was still progressing and liquefaction rapidly at work.

CASE 2.—Came with infiltration of the right apex and adhesions of the right lung to the diaphragm after pleuro-pneumonia. Perfect recovery in five months.

CASE 3.—Had a very large cavity in the right lung, extending into both upper lobes; moist râles all over the right lung, infiltration being extensive. In four months expectoration diminished to one-third, and strength and weight were gained. There was no inherited disposition. The process being now arrested and the cavity closing, recovery may be expected next winter.

CASE 4.—Convalescent from a pneumonia. No infiltration. Very feeble breathing, and imperfect expansion of left lobe. Douches used. Recovery perfect.

CASE 5.—Course exceptional. The appetite improved directly on arrival, sleep returned, fever and night-sweats ceased, and there was no diarrhœa. The state of the lungs also much improved. But this patient lost constantly in weight. He is a medical man, and says of himself, "in every other respect I made a splendid cure, only the constant loss of weight frightens me." [I may add that this gentleman saw me late in the year, and I would have dissuaded him from going so late to Davos; but he, knowing too well the probable course of his malady, stopped me, saying quietly he had determined to go. Both lungs were diseased, but I have not the exact notes at hand.—T. C. A.]

CASE 6 is one in which I (T. C. A.) am deeply interested. I shall give hereafter some extracts from letters this gentleman has written to me. I urged him decidedly to spend the winter at Davos rather than proceed to Egypt as he had intended. He had cavities at one apex and infiltration at the other. He had been a *poitrinaire* for four years, and when he reached Chur could scarcely walk up to his bedroom. His hectic was continuous and severe. Dr. Rüdi now reports of him:—"After staying here another winter he may return to England, although the infiltration at the back part of the left apex will not have fully disappeared." I shall, as I have said, speak further of Case 6.

The two following cases died.

CASE 7.—Had come to me (T. C. A.) for many months in 1876-7, in hopeless phthisis. Both lungs were extensively involved, and he had been repeatedly in bed with intercurrent pneumonia. There were other reasons for despairing of his state, among them great anxiety and pressure of business. As his life was very valuable I named to him last October the chance Davos might give him, and I put fairly before him the risks and the hopes. He decided to go on his own responsibility, and I described his going to his friends as a bold stroke for life. The patient wrote to me several times in good spirits, and assured me how much better he was. His appetite and his strength improved; his fever diminished, but *never ceased*. It was normal some days, but it would then run up in an evening to 100° to 101° F., and Dr. Rüdi always found the physical signs gaining ground rather than giving way, and wrote to me without holding out any hope. He died in the middle of February, but his departure from England is not wholly to be regretted, as he certainly suffered less than he had done at home.

CASE 8.—Came to Davos on Dec. 20th, 1877, with both lungs infiltrated, the right more extensively. In right middle lobe a cavity. Fever considerable, 102° to 104°, commonly 103·5°. This never diminished. Death occurred on March 20th following. It was a lost case when patient arrived, and should have been sent much earlier in the year if sent at all.

CASE 9.—Arrived Aug. 6th, 1877, very ill. Insufficiency of mitral valves after rheumatic fever; there was also a catarrhal state of the right apex. This was therefore a complicated case. Patient gained weight, recovered well, and was sent home cured as regards his lung.

The rest of the cases contain no phthisis, and are as follows:—

CASE 10.—When at Davos I thought the patients had, for the most part, an air of well-being, but Mr. ——, on the contrary, looked wretchedly weak, pallid, and ill. Mr. ——, subject to catarrh of the stomach, came to Davos Aug. 25th, 1877, aged twenty-five, and left again on April 3rd, 1878. The patient writes as follows:—For years he had suffered from chronic dyspepsia, debility, constipation, headache, &c. In March 1876, was put under a "vegetarian-starvation" diet. In three months lost three stones and a half in weight, and could not rise from bed. Rallied under different treatment, but never regained power of digesting food without great pain and distress. Thus from July, 1876, to June, 1877. Then went to Aix-la-Chapelle, and for six weeks had stomach washed out every morning before breakfast by

[1] Vide THE LANCET, October 20th and 27th, 1877.

[2] These cases are purposely divested of personal data, as in a society like that of Davos each is known to all. Full particulars of the cases are, however, on record, and will be gladly supplied to any medical man who wishes for them.

the stomach syphon. Great relief followed at first, then fell back in all respects, and was very ill. On arrival at Davos had great pain and discomfort after food, gnawing pains in the stomach and arms, &c.; appetite capricious; cold liquids "cut the stomach like a knife"; obstinate constipation; unable to move for three hours after a meal; quite unable to read or write, or even to listen to reading. By November was able to walk five hours a day; could take much more food, and with less discomfort. By April, altogether much stronger, able to read and write, and take plenty of exercise. Could now drink cold liquids at meals, and was in most respects wonderfully better. Digestion remained, however, weak, and diet had still to be restricted to plain meat and bread, and a little fruit. Weight: Aug. 21st, 1877, 7st. 2lb.; Sept. 21st., 7 st. 9 lb.; Oct. 19th, 7 st. 12 lb.; Nov. 26th, 8 st. 2 lb.; Dec. 25th, 8 st. 6 lb.; Jan. 22nd, 1878, 8 st. 11 lb.; March 1st, 9 st. 6 lb.

CASE 11.—Arrived Nov. 15th, 1877. Hyperæmia of liver; nervous excitement, nocturnal emissions, headache, and debility. Ordered sal. therm. Carol., iron with nux vomica, cold rubbings, and douches. Left on April 10th, a great deal stronger, but not quite recovered.

CASE 12.—Arrived on Sept. 14th. Old catarrh of rectum, piles, and recurrent dyspepsia. Ordered cold douche, exercise, and diet. Recovered, and left April 5th, 1878.

CASE 13.—Hysteria, neuralgia, slight anteflexio uteri. Left much better than she came, but scarcely fully recovered.

CASE 14.—Catarrh of the bowel. This case Dr. Rüdi regards as really incurable, and says she is no better. Patient, however, thinks herself wonderfully stronger, and has been able to enjoy life and to take exercise in a measure unknown to her before her arrival. [T. C. A.]

CASE 15.—Chronic dyspepsia and nervous debility and depression. [Sent by me at his own suggestion.—T. C. A.] He left Davos in a very good state of health, and his depression probably will not return. This gentleman had travelled to many health resorts without relief.

CASE 16.—Hysteria, anæmia, and neuralgia in a young girl. Ordered milk, exercise, douches. Gained weight considerably. Sent home in five months, cured.

CASE 17.—Nervous headache and nocturnal emissions, produced by mental work. Ordered exercise, douche, and nux vomica. Perfect recovery.

CASE 18.—Hepatitis chronica. Ordered Tarasp water and exercise. In two months left, much relieved, not quite recovered.

CASE 19.—Melancholia supervening on nocturnal emissions and mental strain. Too nervous to stand douches, and was sent to Baden to take them. He is there under treatment.

I have thought it desirable to include all the English cases under treatment, though of course many of these miscellaneous cases are of little value. As a rule, perhaps, nervous diseases would do as well or better elsewhere, but they may serve to illustrate the tonic effects of the climate and the ease with which a winter is tolerated at a height of 5000 feet.

In accordance with my purpose, I now give some extracts from the letters received from the patient indicated as Case 6. I may be permitted to state that his evidence is of the highest possible value. In a letter dated Dec. 31st, 1877, Mr. X. says: "I have gone on, so Rüdi says, steadily improving, and he told me last Saturday that the cavity was beginning to close. There is certainly a depression in the surface above the place where it is supposed to be. I can walk a matter of from six to eight miles in favourable states of the atmosphere—i. e., when it is at the coldest and stillest,—doing this work in five hours. I have acquired the habit of walking very slowly. I have had several little colds, which have all passed off without much trouble. In the course of one catarrh I began to spit blood-streaks after exercise, but a few days' resting removed this symptom. My temperature hardly ever rises above the normal, and then I do not think it has touched 100° more than once..... I sleep fairly well, and have a really sound appetite, though I find the digestion rather difficult to keep in order. This is probably due to monotony of diet and want of change in the case of one who, like myself, has never spent three months in the same place since he was thirteen. My spirits are excellent, in spite of the unutterable *ennui* of the promenades and want of society. In this respect Davos seems to me to beat all health places I ever tried. They have always depressed me after a sojourn of a few weeks. Davos agrees capitally with my wife and children and all our party." In a letter dated "Feb. 6th, 1878, barometer in sun 141° F., overpoweringly blazing," Mr. X. says: "You are welcome to use any parts of my letters if they can be of the least service to you." On Case 7 he comments as follows: "Poor —— has gone steadily down-hill ever since he came here. One thing I feel inclined to remark, *à propos* of his case, is that he came too late in the season. It was quite cold when he arrived, and he never gained strength enough to be able to take exercise. Exercise is, I am sure, the very soul of the winter cure. A really debilitated patient ought to come here in the early half of August, and if he cannot get up his strength by the middle of November, to leave before the snowfall..... I am sure that really bad invalids coming here should be advised, at any cost, to get south rooms and a large room. Many people seem to me to suffer from crowded sitting-rooms and from sleeping in north rooms. Unless they approximate, at any rate, to the ideal in this respect, I have a strong instinct they will not give Davos a fair chance. We have had a large proportion of days this winter when even an invalid so comparatively active as I am had to keep the house. Then the question of rooms is serious." In some interesting passages in another letter, Mr. X. wonders whether the very rest to the emotions obtained by residence in "quiet and non-human circumstances" does not help to work out a cure, and whether emotional impressions do not tend to have a directly injurious effect upon a diseased organ.

Another able correspondent writes to me on Feb. 9th, 1878: "No doubt you think there must be a great deal of time for letter-writing here, but I assure you it is not so; the days are not half long enough for all one wants to do; then, of course, out-door exercise and amusements take up a good deal of the day, as one feels that to be in the open air as much as possible forms much of the whole duty of man. It is said by regular Davosers that this has been an exceptionally bad winter. We have had so much snow and bad snowstorms, lasting three or four days. Yet the days on which we have not been able to go out at all have been few and far between. Even my invalid sister (Case 14) has often taken her constitutional on the boarded terrace while it has been snowing fast; and we have had the most glorious days to repay us for any amount of snow. Since this month began it has been splendidly fine, with the exception of a little snow on one morning. Consequently we have been skating, sledging, and expeditioning as much as possible. You may imagine how much better my sister is, or she could not be equal to such excursions. I am thankful to say she is decidedly better. Though she still suffers from pain in her head and has not much appetite, yet in essential points there is a great improvement: the complaint is better, she takes little medicine, she is stronger, and walks and sleeps better." Next comes an account of in-door amusements—"glee-singing, tableaux vivants, German cotillons, charades, a play and Shakspeare readings once a week, with a concert now and then." Of Mr. —— (Case 10) the letter says: "You would be surprised at the change in him; he looks, and is, wonderfully better, and takes part in all the entertainments in the most vigorous manner. ..... Mr. X. also [my former correspondent, T. C. A.] looks quite a different man to what he did. Mrs. X. was telling us to-day how much and how steadily he was improving in health. Most of the invalids in this house are making good progress, except poor Mr. —— (Case 7), who is very ill, and an Italian lady, whom the doctor has sent away."

These letters give some pleasant insight into the winter life at Davos; and the remarks of Mr. X. on the evil of stuffy rooms are most important when considered in the light of the aseptic hypothesis. Not only so, but I have ventured to urge upon the Kurverein in the strongest manner the duty of securing pure air both within and without the houses. I believe the Verein is in some measure alive to this; scarcely sufficiently so; yet it is a vital point. Let the district once be saturated with sewage, and the virtues of Davos may vanish. Of the manuring of the meadows, I am assured that this is almost all done at snow-melting, when no patients are in Davos. Then the winter's dung is put out. The October dressing is a limited affair, as the cows have lived all summer in the Alps, and there are no great accumulations. During the snow-melting the visitors depart to Italy or to Baden-Baden.

To those who are thinking of passing the summer at Davos, I would advise that they leave England as the summer begins, travel slowly through the continent, stop a few nights at Ragatz, and arrive at Davos about June 20th.

Leeds.

ON THE

APPLICATION OF THE MICROPHONE TO THE OPERATION OF SOUNDING FOR STONE IN THE BLADDER.

BY SIR HENRY THOMPSON,

SURGEON EXTRAORDINARY TO H.M. THE KING OF THE BELGIANS, CONSULTING SURGEON TO UNIVERSITY COLLEGE HOSPITAL, AND EMERITUS PROFESSOR OF CLINICAL SURGERY.

ATTEMPTS have long ago been made to augment or intensify the note elicited in the operation of sounding, by the blow which is given to a small calculus, for the purpose of producing unmistakable evidence of its existence, the note naturally produced from such an one being often small, sometimes doubtful in character. An example of this is the well-known sounding-board invented by Mr. C. Brooke, late of the Westminster Hospital. The reason for desiring to attain this object is still more obvious when suspicion exists that a small fragment of calculus remains in the bladder at the close of a case of lithotrity. I am bound to say for myself that I think a practised hand and ear form an organisation amply sufficing to discover readily either a very small calculus or a small fragment by ordinary sounding. I have too frequently demonstrated the truth of this proposition in practice, both at home and abroad, to make any further statement respecting it necessary here.

But this is not a universally-received opinion; moreover, it is true of necessity that all hands and ears are not highly practised, and in some instances it may well happen that the power of magnifying small notes, which often pass unheard, will prove useful to any of us, whether we are practised or unpractised.

As soon, therefore, as I had heard of the microphone, which may be described as an instrument capable of greatly magnifying the smallest note, it naturally occurred to me that it would afford an opportunity of producing easily-attainable and unmistakable evidence of the presence of a foreign body of very minute size in the bladder. I went to the well-known inventor, Professor Hughes, with this idea, and he at once most courteously provided me with a form of microphone which he believed suitable to the purpose, and explained the arrangements necessary. These consist in the production of a galvanic current, commencing in this instance with three cells of a Leclanché battery, and passing by means of a very small flexible insulated wire through a telephone, then through the microphone attached to the handle of the sound to be employed, and lastly back to the opposite pole of the battery to complete the circuit.

Having to perform lithotrity last Saturday morning, I invited a few friends to judge of the results, among them Mr. Erichsen, Dr. Yandell (of the United States), Mr. Berkeley Hill, Mr. Clover (who administered ether), and Mr. Buckston Browne. The slightest touch of the stone, or contact with a small fragment, inaudible to a listener close to the patient, was distinctly heard by those who stood round the telephone at any distance; while, if the telephone were brought to the ear of any one individual, the sounds were notably loud and distinct. The note produced does not always resemble that which we hear in striking the stone itself, but is a distinct click, which at once conveys the impression that a foreign body has been struck, and, when met with by any exploratory movements of the sound within a bladder, reveals the presence of some hard foreign body there. Rubbing sounds of a wholly different character, quite subordinate to the click, are heard also. These are produced by friction of the instrument against the walls of the bladder and urethra, but do not interfere with the power of appreciating the note from the hard body. When I say that this particular microphone which I employed is sensitive enough to make audible the march of a housefly over a piece of net, it will be understood that the smallest piece of stone, if struck, will certainly reveal its presence by a note.

I am repeating my experiments, and doubt not that, successful as the first has been, some improvement in the procedure will still be attained, and if so, I shall take an early opportunity of reporting it.

One remark may be added. We have only to substitute a probe for the sound, when desiring to explore a sinus or wound, and the slightest scratch on a piece of dead bone, on a leaden bullet, or other foreign body, beyond the reach of the finger, will be rendered audible in the same manner.

Wimpole-street.

CASE OF SUCCESSFUL CÆSAREAN SECTION IN A DWARF.

BY NORRIS F. DAVEY, M.R.C.S., &c.

THE following case presents several points of interest with respect to the position of the patient during the operation, the treatment of the uterine wound, and the eventual condition of the patient long after recovery.

Mary Ann M——, a rachitic dwarf, 3 ft. 8 in. in height, thirty years of age, unmarried, primipara, was taken in labour at the full term at 1 A.M. on September 29th, 1871. The pains went on strongly and continuously all day, and at night, the patient being much exhausted, Mr. J. A. Hicks, of Chigwell-row (now of Eastbourne), was called to her. Finding, upon examination, that the pelvis was so contracted and misshapen that delivery was impossible, even by craniotomy, he requested my assistance. Upon my arrival at 11 P.M. I found the patient suffering severe and frequent pains; countenance anxious; pulse weak and rapid; vagina hot, dry, and offensive; a loop of cold, pulseless, cord pendent from it. The pelvis was very diminutive and distorted, the promontory of the sacrum projecting forwards to within about an inch and a half of the symphysis pubis; the form of the aperture of the brim was like a capital V. The head of the child could be felt, but it was impossible to make out the precise position on account of the want of space. No os could be felt, it being dilated and above the brim. The abdomen was very large, and the uterus reached to the ensiform cartilage.

Cæsarean section was obviously the only mode of delivery, and to this, her condition and danger being fully explained to her, she readily consented. Her bed being in a wretched room without any means of ventilation, the temperature of the dayroom of the cottage was suitably raised by means of a brisk fire, and a bed prepared on the floor. All necessary arrangements being decided upon, and her bladder emptied by catheter, I then placed her in the *sitting position* in an arm-chair, with pillows behind her, securing her by means of towels passed round the upper part of the thighs, and made fast to the upright part of the arms of the chair. I was prepared with the ether spray apparatus, but she was so restless and intractable that I thought it safer to give chloroform. This was carefully administered by Mr. Hicks, standing upon the right side of the patient. My assistant, Mr. R. E. Grigson, was placed to the left, and throughout the operation he steadily supported the abdomen with one hand on each side, keeping the abdominal walls in close contact with the uterus. I sat on a low seat in front of the patient, with everything I was likely to want arranged upon a table within my reach. The administration of chloroform was commenced at midnight, and, complete insensibility being produced, an incision about eight inches in length was made, beginning about two inches above the umbilicus, a little to the left of the median line. The peritoneal cavity being reached, a gush of some ounces of sherry-like serum took place; the peritoneum was then divided upon a director to the full extent of the skin wound, and the smooth, hard surface of the uterus was exposed. It was so rigid that I could not make out the position either of the child or placenta. The first incision into the uterus was followed by copious and forcible jets of venous blood; two fingers being passed in as directors, the wound was rapidly enlarged upwards and downwards with a probe-pointed bistoury to the extent of six inches. The child was then found to be in the first position, the right scapula and loin presenting in the wound. Passing in my hand, a foot was easily reached, and the child (a full grown male) turned, but it was necessary to enlarge the wound in the uterus before it could be extracted. The wound was of necessity enlarged upwards on account of the bladder being adherent to the front of the uterus very high up. The placenta was then seen attached to the fundus and posterior wall, and was peeled off without difficulty.

The uterus contracted well, and the hæmorrhage nearly ceased, but one sinus at the upper part of the wound spouted so freely that I took up some of the surrounding muscular tissue with an Assalini forceps and tied it with silk, cutting the ends off as close as possible. Much delay was caused by troublesome oozing from the lower part of the wound, but it was gradually arrested by pressure with a sponge and cold water. The uterus appeared to have contracted much more transversely than longitudinally, so that the wound was still from four inches and a half to five inches long, gaping considerably, and its edges completely everted. I had intended to use an uninterrupted suture of silk, and bring one end out per vaginam, as practised by Mr. Spencer Wells, but doubting the applicability of his plan to such a long wound as this, I resolved to use silver wire sutures, with eight of which (having previously passed two fingers through the os uteri from above to insure a free passage for discharges) I closed the uterine wound. Although the edges were so gaping and everted they were readily brought together as to the peritoneum and its subjacent tissue, but the muscular tissue in every instance was friable, and gave way when the suture was tightened. Mr. Grigson felt the uterus perceptibly harden under his hands at each prick of the needle. The wires were cut off short, and their ends very carefully curled round with forceps, so as to avoid all chance of scratching. Mr. Grigson supported the abdominal walls so well that only one loop of intestine was seen during the operation; this descended on the left side at the moment of emptying the uterus, but it was very easily returned. Owing to the patient's position all the blood, meconium, &c., had flowed at once into a pan placed beneath the chair. Nothing having entered the peritoneal cavity, no sponging out was required. A thin veil of omentum descended after the closure of the uterine wound, but it was pushed up out of the way with a flexible catheter.

It now only remained to close the external wound, which was done as follows. Four equidistant sutures of double silver wire were passed through the entire thickness of the edges, including the peritoneum; intermediately between these, stout hempen sutures including everything except the peritoneum; lastly, a few silk sutures through the skin only wherever required. The whole wound being thus brought into accurate apposition, it was covered with a thick varnish of collodion and tannin; a compress of lint was then applied, and the whole abdomen supported with long bands of adhesive plaster. Two or three soft folded napkins being laid over these, a twelve-yard bandage, four inches wide, was evenly applied from epigastrium to pubes. The loss of blood during the operation was chiefly in gushes from the uterine wound, very little was lost from that in the abdominal parietes, and scarcely any appeared to flow from the surface of placental attachment; the total quantity was between twenty and thirty ounces. In an hour from the commencement of the administration of chloroform the patient was in bed, quite conscious, and feeling but a moderate amount of pain; countenance good; pulse 72, of fair volume. A quarter of a grain of hydrochlorate of morphia was injected subcutaneously.

Sept. 30th.—Noon: Pulse 90 to 100, full, soft; countenance good; skin cool; axillary temperature 100·2°; lochial discharge natural; has slept well and had very little pain; no vomiting; singultus now and then. Mr. Hicks drew off the urine at 9 A.M.

Oct. 1st.—Noon: Countenance good; tongue clean and moist; skin cool; temperature 100°; pulse 80, full and soft; no pain or nausea; lochial discharge natural; a little throbbing in the wound; was uneasy last night till her urine was drawn, but then slept well without opiate. To have a castor oil enema.

2nd.—Going on very well; temperature 100°; breasts filling; no sickness; has had two natural evacuations; lochia free.

3rd.—Doing well; pulse 94; temperature 100°; bandage getting loose; slept well in the night and since.

4th.—Pulse 100; temperature 100·6°; two evacuations; lochial discharge has ceased; is easy and cheerful, and takes her food well. To have a vaginal douche with Condy's fluid. Dressings all removed. The wound has united perfectly by first intention, except about three-quarters of an inch at the lowest part. All the sutures now removed, except the four of double silver wire. Long bands of plaster renewed. Abdomen covered with a large soft compress and a many-tailed bangage from the epigastrium to the pubes.

6th. — Doing well. Pulse 88; temperature 100·2°. The silver wires all removed. The lowest part of the wound looks well; there is a little healthy pus, and healthy granulations are appearing. An offensive discharge from vagina. To have a draught of quinine and dilute sulphuric acid three times a day.

It is unnecessary to give any further details of the patient's progress. Suffice it to say that on the 13th she was able to sit up and to pass urine naturally, and on the 15th the wound was quite healed. She soon recovered her strength, and menstruated about three months after the operation. The cicatrix was at that time almost linear, and four inches and a half long. Her abdomen was well supported with a broad bandage, which she was cautioned not to discontinue. Her present condition so far as regards her general health is quite satisfactory; but, owing to her having left off all support to the abdomen, the cicatricial tissue has gradually given way, and the intestines now protrude in an enormous hernia, seventeen inches in circumference at the point of escape. She wears a firm bag and band, so that no further increase of the hernia is now to be feared.

I can find no mention of any case prior to this in which the patient has been operated upon in the sitting position. It may be objected that such an arrangement would render her liable to syncope; but neither in this, nor in two cases thus operated upon by an obstetric friend in London, nor in a fourth which occurred in the practice of a brother practitioner in Essex, has anything of the kind been observed; and even if it had been, I think the risk more than counterbalanced by the fact that all escape of fluids into the peritoneal cavity is effectually prevented. In all the cases the position has proved extremely convenient to the operator.

Romford.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

GUY'S HOSPITAL.

TWO CASES OF EPITHELIOMA OF THE TONGUE, AND ONE OF EPITHELIOMA OF THE FLOOR OF THE MOUTH; OPERATIONS; RELIEF.

(Under the care of Mr. BRYANT.)

Epithelioma of tongue; operation; relieved.—(The following notes were taken by Mr. J. T. J. Morrison.) Elizabeth S——, aged sixty-one, was admitted into Lydia ward on the 28th August, 1877, with a tumour, the size of a small chestnut and of tolerably firm consistence, situated behind the middle of the right edge of the tongue, not encroaching appreciably upon either the dorsum or under-surface. The surface had a granular appearance, and the growth overhung the contiguous surface of the tongue, forming a kind of constriction or neck, but it did not apparently involve the deeplying structures. Behind the tumour there were several small papillary eminences, but no glandular enlargements in the neighbourhood. The family history gave no evidence of the existence of cancer or tumours, and the patient herself had been very healthy all her life. She was married, and had several children living and quite healthy.

Six months before admission she first noticed something wrong about the right edge of her tongue, from a feeling of soreness there. She then found a hard pimple. As it increased, she consulted a medical man, and he applied a crystalline substance to the pimple, which caused a rawness, and the pain increased. She then consulted another surgeon, who applied nitric acid without benefit. The growth slowly increased, but more quickly at last, and at the same time there was more pain and greater discomfort in eating, so that at the time of admission solid food could only be taken when finely minced.

Aug. 31st.—Chloroform having been administered, the tumour was isolated by two needles, and removed by wire écraseur, one artery being twisted.

Sept. 4th.—She complained of an unpleasant taste in her mouth. Temperature 98·4° F.

7th.—Her teeth ached on the right side of her face in the upper and lower jaw.

10th.—There was a clean granulating surface, the granulations being rather of wart-like appearance. A week later she left the hospital.

Epithelioma of tongue; operation; relieved.—(The following notes were taken by Mr. H. Hine.) John D——, a labourer, aged sixty-two, was admitted into Job ward on the 9th of October, 1877, with a sore on the right side of his tongue about an inch long and three-quarters wide. The margins were not abrupt, but sloped upwards. The portion of tongue round was hard and indurated, and there was a little pain on pressure. The middle of the tongue was furred thickly, but the part near the sore was smooth. No papillæ, but with glazed appearance. The patient was a widower, with two children living and healthy. About a year before he noticed a small lump at the side of his tongue. It gradually grew larger. Ten weeks before admission it began to get sore and eaten out, but even then he suffered no pain. His family history was good. He did not smoke, and he did not know of any tooth rubbing it.

Oct. 12th.—Chloroform being given, a stitch was passed through the front of his tongue so as to pull it forward. Then two needles were passed through between the sore and other parts. A wire écraseur was then passed round the needles, and after nine or ten minutes the part was removed. Two or three vessels were twisted as they bled.

13th.—The patient was going on well.

20th.—There was a nice healthy granulating surface rapidly healing over the edges. He progressed favourably, and left the hospital on the 26th.

Epithelioma of the floor of the mouth and lower jaw; removal of symphysis; relieved.—(The following notes are also by Mr. H. Hine.) J. S——, a workman, aged fifty-five, whose family history was good, was admitted into Job ward on Nov. 7th, 1877. He was a married man and both he and his family were all healthy. About six months before admission he noticed that the floor of his mouth was sore. He was in the habit at that time of smoking a good deal a clay pipe, which he thought might be the cause, and he left it off. At first there was no hardness, but after two or three months he noticed a hard lump near to the bone, which was at first slightly movable, and was not always in the same position. The lump increased in size, and became fixed, and during this time his lower incisor teeth got loose, and also sore.

When admitted there was a sore on the floor of the mouth, which extended forwards as far as the symphysis of the jaw. The parts were hard, more especially anteriorly, and were fixed. The front teeth of the lower jaw were bad, irregular, and more or less loose. On the left side, there was a hard glandular swelling in submaxillary region about the size of a pigeon's egg; there was no other glandular enlargement. This had been coming on for two or three weeks. He did not suffer any pain except when eating.

Nov. 13th.—Chloroform was administered, and an incision was made below the jaw about an inch and a half on each side of the median line of the chin. The whole thickness of the soft parts was dissected freely away from the bone. Then with a chain-saw the inferior maxilla was sawn through on each side, about the position of the canine teeth, and then, by cutting through the base of the tongue, the whole growth, with the central portion of the lower jaw was removed. The incision was extended to the left, and the gland beneath the angle of the jaw was dissected out. Free hæmorrhage was arrested by torsion; the facial artery, vein, and nerve were cut through. A suture was put through the base of the tongue, and brought out through the chin, and tied there to keep the tongue from falling back. The edges were united by sutures.

The growth was a typical specimen of epithelioma infiltrating the tissues of the floor of the mouth, and extending some little way into the bone of the inferior maxilla.

14th. — The patient was very quiet, and seemed pretty well.

15th. — There was some bagging on the left side of the cheek.

16th. — Some pus was let out from the left side of the cheek. Temperature 98·4°.

17th.—Primary union in the parts had taken place. Some sutures were removed.

19th. — He had but little pain, and had passed a good night.

21st.—He was able to swallow milk well.

26th.—The external wounds had nearly healed. The sore inside the mouth was going on well.

Dec. 3rd. — He left the hospital. The external wound had quite healed, and the scar was hardly visible. He was able to swallow well.

Jan. 24th, 1878. — Called at the hospital, well. No signs of disease.

EVELINA HOSPITAL FOR SICK CHILDREN

(OUT-PATIENT DEPARTMENT).

EMPYEMA; ASPIRATION ON TWO OCCASIONS; RECOVERY.

(Under the care of Dr. GOODHART.)

FREDERICK F——, thirteen months old, was brought to the out-patient room of the hospital on November 27th, 1877. It had been taken ill five weeks before. Convulsions and fever were its symptoms. It had no rash, but much trouble in swallowing, and since that time it had been wasting and fretful. The left chest moved but little. The intercostal spaces were bulging. There was bronchial breathing at the apex and near the spine, and dulness all over that side. The heart was a little displaced to the right to judge by the intensity of the sounds, for the impulse was not marked anywhere. The respiration on the right side was puerile.

The child was in a miserably wasted condition. Aspiration was performed in the sixth interspace posteriorly, near the angle of the scapula, and six ounces of offensive pus withdrawn. A rather large trocar was used, with the intention of facilitating a subsequent spontaneous leakage from the wound. However, at the child's next appearance, three days later, no more pus had come away. Its temperature was then 99·8° F., and it looked flushed. There was but little movement in the left side, and still complete dulness, the heart's impulse being still indistinguishable in its proper position, but there was much more respiration even to the base. It had taken its food well. It was ordered half a drachm of the syrup of phosphate of iron.

Dec. 4th.—Losing its pallor. Takes its food well, and sleeps better; not much cough. The mother notices it to be feverish at times, and fretful towards evening. The chest is still dull, but respiration, though somewhat feeble as compared with the other side, is very fair, and nowhere tubular; a little bronchophony over the scapular region. Temperature 98°.

7th.—Not so well for the last three days, having refused its food. There is nothing fresh in the chest on auscultation. There is fair, though feeble, respiration and movement. Hypodermic syringe used in the ninth space without effect, but, on withdrawing it, the point was found plugged by thick pus. It was again inserted in the seventh space at the angle of the scapula, and two drachms of inoffensive pus withdrawn. No more would flow by the syringe, but a little leaked away slowly afterwards. Ten-mimim doses of rectified spirit with phosphate of iron were ordered.

14th.—Much better again. No more pus came away. Cough troublesome, but has taken its food well. No diarrhœa, but a good deal of sweating. Temperature normal.

Jan. 8th, 1878.—The chest continues much the same, except that there is now decided retraction below the left clavicle, and still complete dulness at this part, though resonant elsewhere. Respiration deficient. A good deal of crepitation at parts, especially below the left nipple. Has much diarrhœa, and sleeps badly. Weight 12 lb. 13 oz.

Feb. 1st.—Much better. Weight 14 lb. 12 oz.

March 1st.—Weight 15 lb. 6 oz.

April 26th.—Weight 17 lbs. 8 oz. The child seems now to be quite well. There is slight loss of resonance at the left apex, but respiration is very good indeed, and there is no longer any marked retraction of the chest-wall.

Remarks by Dr. GOODHART.—Hitherto paracentesis has not been a successful operation. Results other than cure are more likely to happen—viz., repeated re-collection, spontaneous pointing at the seat of puncture, or subsequent chronic lung disease. Some look more hopefully to paracentesis than do others. Dr. Barlow and Mr. Parker state that in seven cases at least they have seen an excellent recovery after a single aspiration, and that successful results have been obtained after repeated aspiration; but in any

case such results must be considered at present exceptional, and continue so till a larger number of actual cases are on record. This case illustrates also another point—that if there is evidence of fluid in the chest, and none is withdrawn by puncture at one spot, the trocar should be reinserted somewhere else. Empyemata are not uncommonly located or associated with the formation of much lymph or caseous matter. Under such circumstances, paracentesis towards the base is very likely to be "dry." *Apropos* of this, in another case of left empyema lately under observation, the only spot at which pus could be withdrawn was in the second interspace in front.

QUEEN'S HOSPITAL, BIRMINGHAM.

CASE OF ATRESIA OF THE HYMEN; HÆMATOMETRA.

(Under the care of Mr. CLAY.)

THE following cases are reported by Mr. Weston, the obstetric assistant, to whom we are indebted for the notes.

R. A——, aged fifteen, servant, was admitted on the 28th of March, 1878. The family history was good. She had never menstruated. Had always enjoyed good health up till last June, when she felt pains in her back and lumbar region, as well as across the abdomen, which had increased in severity more or less ever since, but had never been sufficiently severe to prevent her entirely from following her occupation. The pains were intensified by exertion. She had noticed that she had been getting stouter lately.

On admission the patient was seen to be a stout, well-developed, healthy-looking country girl, but appeared six or seven years older than she really was. She complained of dysuria and difficulty in defecation, and the bowels were constipated.

The abdomen, on inspection, was found to be prominent, the enlargement extending from the pubes to within an inch of the umbilicus. On palpation an enlargement could be felt, which was firm and globular. On percussion, dulness extended from the pubes to within an inch of the umbilicus, and for three inches and a half on each side of the median line. The measurements were—opposite umbilicus, 31½ in.; midway between umbilicus and pubes, 35½ in.

On making a vaginal examination, a dense, firm, vascular membrane was found entirely to close the orifice of the vagina. The membrane was bulged outwards, and very distinctly fluctuated. To the finger it felt almost exactly like the bag of membranes made tense during a labour pain. On coughing there was a decided impulse and increased bulging.

On examination per rectum the posterior wall of the vagina was pushed backwards, and there was distinct fluctuation. The mammæ were prominent and well developed.

On March 30th, after consultation with Dr. Heslop, Mr. Clay decided to make an incision into the membrane, and evacuate the contents. The patient being placed under chloroform (the carbolic spray was directed upon the parts, and the instruments and hands of the operator and assistants were also carbolised), an incision was made into the membrane about one inch long, when 30 oz. of a dark fluid, very much resembling coffee-grounds, escaped. The opening was enlarged by two small lateral incisions, and a glass drainage-tube, of the diameter of about half an inch, was placed in the vagina, with a collar round it, to prevent its slipping entirely through the opening. The vagina was then washed out with carbolic lotion (one in forty), and a carbolised sponge was placed over the vulva, which was covered with stypium and a T-bandage applied to retain the dressing. After the evacuation of the fluid the enlargement in the abdomen had entirely disappeared.

The fluid was perfectly odourless. Under the microscope were seen a large quantity of blood-cells, with an unusual quantity of white cells and granular matter, specific gravity 1030.

Patient recovered well from the chloroform. Temperature 99°; pulse 92. Vagina washed out every three or four hours with carbolic lotion; the carbolic spray also used at the time the dressings were changed. Catheter passed.

The patient slept well, and next day was free from pain. The vagina was kept constantly washed out; no odour at all. Temperature and pulse normal.

On April 2nd the tube was removed from vagina. The vagina was washed out morning and evening with carbolic lotion. To have some chicken for dinner, and to get up. Temperature and pulse normal. On the 4th, the patient expressed herself as feeling quite well; discharge from vagina hardly perceptible. On the 7th she was discharged, cured.

CASE OF INCONTINENCE OF URINE.

M. P——, aged twenty-two, a general servant, was admitted April 17th, 1878, under the care of Mr. Clay. The family history was good. The patient was well nourished and healthy; never had any illness until Christmas last, when she had rheumatic fever. She had suffered from incontinence of urine since her birth; at times it constantly dribbled away from her, at other times she could retain her water for several hours; when the bladder felt full, she had little or no power to empty it; she sometimes experienced great pain on passing her water.

On April 20th Mr. Clay dilated the urethra with "Weiss's female urethral dilator," so that the finger could be passed into the bladder. On the 25th the patient had a little more control over her bladder, but was still unable to retain her water for any length of time. On May 6th she was discharged much relieved.

On May 20th she came to the hospital as an out-patient. She stated that she could retain her water all day, and had perfect control over the bladder.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

A New Form of Sphygmograph.—The Spirillum Fever of Bombay.—Aneurism of Aorta and Innominate Artery.—Cases of Intussusception treated by Abdominal Section.—Iodic Purpura.

THE concluding meeting of the session was held on the 28th May, Dr. C. West, President, in the chair. Several papers were read, most of them in abstract.

Dr. GOWERS exhibited a New Form of Cardio-Sphygmograph, designed to provide for the regulation of the pressure by a method at once accurate, simple, and convenient—viz., by the movement of a second spring over the first. The extent to which this second spring is moved down both regulates and indicates the pressure employed, the sides of the sphygmograph bearing the graduation in ounces, and the number opposite the end of the spring indicating the pressure exerted. The spring is moved by means of a rack-work and pinion, and can be adjusted with equal convenience from either side of the instrument. The instrument is supported by the sides, and the distance of these apart, and the arrangement and projection of the button on the spring, are such that it can be used with equal convenience as a sphygmograph or cardiograph. In recording the action of the heart, the knife-edge is movable, so as to adjust the movement of the writing lever to the desired extent. The instrument has been in constant use for nearly a year, and has been found convenient and reliable. It was thought possible that the second spring might unduly lessen the range of movement at high pressures, but this has not been found to be the case. As illustrations of its use, tracings were shown from the pulse of an individual in health, at various pressures, from a case of mitral constriction (auricle, ventricle, and radial pulse), and also from the pulmonary artery and radial pulse in a case of phthisis—the first tracing, it is believed, which has ever been taken from the pulmonary artery of man. The instrument is made by Hawksley.

The following abstract was read of a paper, entitled "Notes on the Spirillum Fever of Bombay, 1877," by Dr. VANDYKE CARTER. The author begins by expressing his conviction that by means of the clinical thermometer and microscope it has now been demonstrated that the new Bombay fever is identical with the famine fever, relapsing fever, or recurrent typhus of Europe, and he insists upon the importance of this fact. Proofs are arranged as being de-

rived from—(*a*) the natural history of the epidemic, (*b*) from the symptoms noted, and (*c*) from the pathology indicated, as follows:—1. The rather abrupt appearance of a malady evidently connected with unusual and excessive want, fatigue, and overcrowding; its spread with the increase, and subsidence with the abatement, of these hygienic defects. 2. The remarkable resemblance in clinical characters of this new malady with the relapsing fever of Europe—a resemblance so close as of itself to be decisive of actual identity. 3. As a special feature, the invariable presence in the blood, during pyrexia, of a minute parasite, which, so far as known, is peculiar to one form of fever only—viz., the relapsing. It is also noted as significant that the new fever has raged most at that season of the year when there is least malaria, and has declined when remittents commonly begin to appear. Quinine does not check its course. The first or natural history proof will be developed hereafter; but it is already apparent (in the author's estimation) that this epidemic arose contemporaneously with excessive afflux of famine-stricken people; that as the pressure of immigration augmented, the "fever" death-rate rose; and lastly, that contemporaneously with diminished influx, and with active deportation of families to relief centres in the interior, this comparative fever mortality began to decline, though had it been due to malarious influence alone the reverse would have been the case. And with regard to the influence of defective sanitation, there is no evidence that Bombay was in a worse state than previously, and, besides, relapsing fever does not arise from filth. Most stress is, however, laid upon the proved identity of symptoms and pathology, and in proceeding to discuss these, reasons are given for introducing the designation "spirillum fever," the word spirochæta not lending itself so well; and occasion is taken by the author to acknowledge the valuable co-operation of Drs. Succaram Arjoon, and Anna Moreshwar K., of the Jamsetjee Jejeebhoy Hospital, Bombay. Some general observations follow, the sources of information being a camp of refuge, and two large hospitals of which the author had charge at different times. In all, some 900 cases of "fever" of all kinds, and taken without selection, have been examined, and of these about 350 were demonstrated to be instances of spirillum disease; about the same number of cases (chiefly malarious) did not show the parasite, and the remainder were not microscopically scrutinised; they were the milder, obscurer, and mostly sequelar instances. Upon full consideration the author concludes that upwards of one half (it may be more) of the sickness in Bombay was due to the famine fever. From the data now alluded to, it was evident that malarious fevers were to be infallibly distinguished by the absence of the spirillum; but the author admits he had no previous conception of the variety of form and degree the parasite fever may assume; it might, indeed, like the malarious, be regarded as an order or genus of specific fevers. As to its analogies with the last-named group, secondary or later paroxysms may closely resemble "intermittents," or aguish attacks, and as the blood parasite may or may not be found in such brief exacerbations, it is evident that much difficulty may be felt in deciding upon their real character. Here experience in India quite accords with that in Breslau and Petersburgh, for example, and different explanations may be offered, the author alluding to an instance he has met with of ague-like fever being occasionally attended with a spirilloid blood-parasite. The more important question of the relationship of the spirillum fever with "remittents" is then briefly discussed: first, paroxysms always, and relapses frequently, of the former present a persistent pyrexial state, which may be either "continuous" or "remittent." In Bombay it was perhaps as often one as the other, but is invariably marked by the presence of the blood-spirillum, whilst this will be vainly sought for in pure remittent attacks. It sometimes happens that the apyretic or free interval is so filled up with daily changes of temperature that the date of relapse is not evident in the chart. If not due to local complications, there may here be the addition of a remittent, or, as the author thinks not unlikely, of veritable typhus; and, by means of the microscope, it will always be possible to demonstrate the occurrence of a relapse, even under these circumstances. When detected our prognosis may be more favourable than it otherwise would have been. Symptomatic fevers as complications are next alluded to; and, lastly, the author expresses his concern that "remittent" fever continues to be the official name of a malady so distinct in important respects as the spirillum or relapsing fevers. Instances of typhus icterodes and of "hæmorrhagic" typhus are mentioned, in which the blood-parasite was found, as it has been in Europe. It has not been found, however, in "enteric" fever (with a very doubtful exception), varicella, elephantoid fever (where the filaria was detected), and every other ordinary febrile ailment concurring with the specific. Some general remarks on fever follow, and the course of future inquiry is suggested. The value of a thorough acquaintance with all stages of the spirillum fever is insisted upon, because only by this means can obscure or late instances be understood. The entire correspondence in symptoms of an ordinary attack of the relapsing fever of Bombay with that of Europe is pointed out, the author adverting to his own illness in part proof. Due prominence is given to this important identification. Instances in which no relapse occurred are particularly mentioned; they were 25 per cent. of all recovered cases, but if fatal ones be added of persons dying during or just after a first paroxysm, then the proportion of instances showing but one febrile exacerbation rises to 40 per cent. Upwards of one-half of all recovered cases show one relapse, 6 per cent. two relapses, 5 per cent. three, and 2 per cent. four relapses. The mean duration of the first attacks and intervals was seven to eight days, with a rather wide range relapses last a shorter time; no difference was noted between an abortive and a relapsing attack, or any fixed relation between the severity of the first and second paroxysms. Repeated attacks of the spirillum fever in the same individual, at long intervals, were well known in Bombay. Individual symptoms next come under review. Prodromata may be wanting, although the spirillum be found within an hour of the initiatory chills of a first attack; they are commonly absent before relapses; jaundice, delirium and the typhoid state, and protracted convalescence, were more frequent than usual in Europe; abortion occurs in pregnant women, and was early recognised; hunger as a symptom was sometimes seen. The mortality, as based upon hospital statistics, may be estimated at 10 per cent; it was greatest at the height of the epidemic, but latterly several deaths have occurred in cases offering typhus symptoms, which have caused a somewhat increased death-rate. The author estimates the rate in ordinary fevers (mostly malarious) as double the above, and in remittents as treble, during the same period. Three-fourths of deaths from spirillum fever take place near the close of the first paroxysm and during the early part of the following apyretic interval. No anatomical lesion, excepting that of the blood, is absolutely peculiar to the fever, and none is invariable; the commonest changes were enlargement of the spleen (nineteen times in thirty-seven autopsies); also fibrinous infarcts (eight) and softening (three); enlargements of the liver seventeen times in thirty-seven autopsies; fatty degeneration (sometimes acute) of the gland-cells of the liver, kidneys, and spleen was noticed, but not of the heart-muscle; hæmorrhages in the arachnoids and other serous membranes, and in the intestinal mucous membrane. The influence of age, sex, season, occupation, pass under notice; the remarkable limitation of the epidemic to the indigent, and those nearest them is pointed out, the middle and upper classes having virtually escaped. The origin *de novo* from want of this fever may seemingly occur, yet it cannot be the usual mode of origin, and contagion as a means of spreading the disease must be admitted. The author's own case is in point here. Rabbits and pigeons resisted inoculation of infected human blood. Adverting to the sanitary and hygienic condition of Bombay in 1877, the author then turns to the year 1864, when, from a wholly different cause—viz., excessive prosperity—the town became dangerously overcrowded, and an epidemic of fever broke out, which was clearly contagious, and, by good authority, was compared with typhus. Whether at that time relapsing fever also occurred is now unknown, but the author is inclined to believe that the latter is not a new disease in this presidency. The remaining portion of the notes is occupied with a description of the spirillum (spirochæta), and other blood-elements detected in this most interesting disease, during the many hundred observations which have been made in Bombay. The method of procedure is described, the different states in which the blood parasite is seen, and although nothing particularly new has been made out, yet the author has had the satisfaction of finding that his independent experience entirely corresponds with most of that collected during recent years in Europe, and he regards this identification of the spirillum fever as a substantial addition to our previous knowledge.

Mr. RICHARD BARWELL communicated the Sequel to a "Case of Aneurism of Aorta, Innominate, Subclavian and Carotid Arteries, treated by the Double Distal Ligature." Robert W—— was exhibited to the Society on November 13th, when the paper entitled as above was read. On the 14th he left the hospital. On the 20th he came to the hospital on formal business, and as he was suffering from bronchitis, Mr. Barwell persuaded him to remain. He was very intractable, and, not being allowed brandy, left on the 22nd, walked home (about two miles), very thinly clad, through snow and sleet, sat four hours in wet clothes without a fire, became rapidly worse, and died on the 24th.—*Post-mortem*: The aneurism, which appeared solid, was removed, together with heart and great vessels. No other disease was discoverable except very acute bronchitis (muco-pus in large and small bronchi), hypostatic pneumonia, and œdema of lungs. Blood in arterial system dark like that of veins. The tumour, which was rather larger than a tennis-ball, sprang from the junction of first and second parts of the aorta. Its pressure had altered the course and relations of the trachea and œsophagus; the larger veins also were peculiar. It was remarkably hard and firm, at its upper part it was elongated into a subsidiary enlargement, which lay in the neck, and was in front divided from the rest of the aneurism by a groove marked in it by the clavicle. The back of the sac was moulded on the apex of the lung. The sac was laid open from behind forward. There was within it still persistent a globular cavity, perhaps an inch in diameter. This was surrounded by very firm clot of variable thickness in front, close to its opening into the aorta. It was rather more than one-third of an inch thick, behind an inch and a half. The subsidiary tumour was quite obliterated, so that here the clot was more than two inches thick. No vessel mouth opened out of the aneurism; the innominate being, like the right subclavian and carotid, obliterated. The left vessels came off from the aorta itself below the mouth of the aneurism. The specimen shows that the tumour had greatly shrunk since the operation; that the whole tumour was as much filled as could be expected in the time; that, had the man chosen to remain in the hospital or been moderately prudent, the whole cavity must almost of necessity have become obliterated, since the aneurism, so thickened by hard clot, could neither have enlarged nor burst, and, since there was no thoroughfare within the sac, there could have been no blood-stream through it. In fact, though the man, by his own perversity, contracted an intercurrent fatal disease, the aneurism was to all intents and purposes cured.

A paper was then read on two cases of Intussusception, in one of which abdominal section was performed, by Dr. C. HANDFIELD JONES and Mr. HERBERT W. PAGE. The patients were under the care of Dr. Handfield Jones in St. Mary's Hospital. The first case was that of a harness-maker aged sixty, who was admitted on May 12th, 1874. Although enjoying good health, the man had passed blood per rectum for the previous twelve months. On May 5th he was seized with abdominal pain, and then passed a teacupful of clotted blood. The pain became constant after May 8th, and when admitted a tumour was found in the cavity of the bowel, round which the finger could be passed, and there was dulness in the left flank, with constipation. He was examined on the 21st with a view to operation, but the surgeon—now no longer among us—concluded there was cancerous disease, having brought away a portion of growth on the finger. The man died on the 23rd. Extensive peritonitis was found post mortem, and a large invagination projecting into the rectum, which could be reduced with ease; and there was no cancer. Regret was expressed at the delay and mistake in diagnosis, as operation might have easily relieved the condition, and perhaps have saved life. The second case presented features of great interest and rarity. It was that of a boy five years of age, admitted on Dec. 31st, 1877, with a history of having lost flesh and been very ill for six weeks. He had severe paroxysms of pain in his abdomen, varying much in frequency, and with some diarrhœa. He improved during the first few days, but on Jan. 14th he had more pain, and there was dulness on percussion in the left flank. This condition increased, and on the 20th, the child being very ill, and there being a distinct hard lump in the left iliac fossa, inflation was performed per anum, and was followed by a rapid subsidence of all the urgent symptoms. His state continued very variable from day to day until Feb. 4th, when the tumour again appeared, and was a second time relieved by inflation. On Feb. 11th, for a third time, and again on Feb. 16th, the tumour reappeared, and was removed by insufflation; and on February 25th the operation was repeated for the fifth time, and caused the disappearance of the tumour, then much larger than before, and both seen and felt in the left iliac fossa. He was taken out of the hospital by his parents on Feb. 27th, with a warning that a recurrence of the disorder was almost certain. Readmitted on March 4th in an alarming state, the symptoms having returned two days before. A large tumour was now felt, reaching from the iliac to the umbilical region, and inflation, when performed in the afternoon, only changed its position, and did not make it disappear. The child continued in great pain, and in the evening insufflation was again tried, and failing, water was injected, but without success. On the following day he was much worse, and at 5 P.M., when speechless and collapsed, he was seen by Mr. Page, who at once performed abdominal section. The tumour was so large that it was necessary to prolong the incision above the umbilicus, and to remove the small intestines from the abdominal cavity. Traction on the upper end of the volvulus was only successful in the extrication of about two inches of ileum, and an attempt to draw off the ensheathing part at the lower end was frustrated by the presence, then discovered, of a second and lower intussusception of the colon, in which the order of parts was reversed, the inferior portion being ensheathed in the upper, which thus became the ensheathing part. The two volvuli met and overlapped each other at their extremities, and it became necessary to reduce the backward intussusception before the ordinary invagination could be relieved. Owing to the great distension of the bowel, and slight adhesions at the ultimate point of the intussusception, this was a work of much difficulty, and was only accomplished by considerable force. The upper or more usual invagination was then reduced with great ease, by gently squeezing the lower end of the volvulus, an action which simultaneously drew off the ensheathing and pushed out the ensheathed part of the bowel, the vermiform appendix being the last to appear. There was some visible congestion and thickening about the cæcum, but no general peritonitis or adhesions. The operation, of which a detailed account is given, lasted an hour and a quarter. The child considerably rallied after it, but died exhausted the following morning, having lived nine hours and three-quarters. At the autopsy the lips of the wound were found adherent. There was commencing peritonitis of the small intestines, but none of the large bowel. At a point corresponding with the upper limit of the volvulus, the mucous membrane of the ileum was swollen and greatly congested, and that near the vermiform appendix was much the same. The meso-cæcum was so lax as to allow of the cæcum being drawn over the left iliac fossa. The method of reducing the upper volvulus is specially referred to as confirmatory of Mr. Hutchinson's experience recorded in the 59th volume of the Transactions, that pulling down the ensheathing part rather than pulling out the ensheathed part is the true mode to pursue. Reduction of the backward intussusception was rendered most difficult from the slight adhesions at its furthest end, and from great hyperdistension of the gut, and, although accomplished without damage to the structure of the bowel, it is thought that such force as was requisite might itself have been dangerous. Reference is made to the long continuance of pain before any definite appearance of tumour, and it is suggested, as an explanation of the cause of intussusception, that pain and the subsequent motor derangement must be ascribed to a functional disorder of the abdominal nerves and ganglia, a relaxed state of a lower segment certainly favouring the intrusion of an actively contracting part above. It is therefore most probable that the essential condition of intussusception is a local paralysis of a portion of the small intestine, which becomes the sheath of the volvulus. Neuralgic pain in other parts is associated with motor paralysis, and probably is so in the abdominal organs. At the same time the laxity of the meso-cæcum may throw light on a predisposing cause of the intussusception. The second and ascending intussusception forms a very remarkable feature in the case, the existence of a single instance of such a condition having been called in question by no less an authority than the late Dr. Brinton. The absence of peritonitis and adhesions after so many recurrences, and the presence of slight adhesions only when the child had been taken home, and when there was long delay in resorting to inflation, show how necessary it is that this treatment should be had recourse to as soon as intussusception is evi-

dent; while the state of the mucous membrane, although the serous surface of the bowel may be free from inflammation, points out the imperative need of surgical interference at the earliest possible moment after other means have failed to give relief.—Mr. GAY said that the same difficulty in diagnosis which had occurred in the first case related had happened to himself. A lady was supposed to have suffered for some years from hæmorrhoids; the bowels were irregular, and blood was occasionally passed. On examination, Mr. Gay found the rectum occupied by a firm swelling, which he believed to be a polypus. A ligature was applied, and a day or two after symptoms of peritonitis set in. When the mass separated, it proved to be an old invagination of the bowel. After its separation the pain subsided, and the bowels were moved naturally, but after a few weeks the patient sank and died. No post-mortem was obtained. It was very important, then, to bear in mind the possibility of confounding these two conditions.—Mr. BROOKE suggested that the passage of a bougie might decide the question.

A paper on "A Fatal Case of Purpura following the Administration of a single dose of Iodide of Potassium, in an Infant the subject of Congenital Syphilis; with remarks upon Syphilitic and Iodic Purpura," by Dr. STEPHEN MACKENZIE, was then read. An infant, aged five months, the subject of well-marked congenital syphilis, had prescribed for it a mixture containing iodide of potassium in two-and-half-grain doses. About three-quarters of an hour after taking the first and only dose, the child's face was noticed to "turn black," and this rapidly increasing, it was brought to the London Hospital three hours after taking the medicine. When first seen the whole of the face was swollen, of a purplish-black tint, the eyelids closed from extravasated blood, the lips and chin tensely swollen and of an almost black colour. The cheeks were discoloured by aggregated patches of purpura. There were a few spots on each arm, but at this time none elsewhere. There were also scattered over the body a few abortive pustules. While the patient was watched the purpuric patches perceptibly increased in size, until in the course of an hour or so the scalp and face were fairly covered. The next day the whole face was swollen, and of a port-wine colour, and there were purpuric spots on the arms and legs. The extravasated blood underwent some changes of colour, and parts of the skin of the face became necrosed in the course of this and the following day. The child died sixty-eight hours after taking the medicine. The necropsy showed characteristic signs of syphilis and ulceration of the intestines. The previous medicines the child had been taking were procured and analysed. They were free from iodine. From the quantity abstracted from the bottle containing the iodide of potassium, it was certain that not more than two and a half grains had been given to the patient. The author stated that as purpura was known to occur in connexion both with syphilis and the ingestion of iodide of potassium, it was necessary to review what was known concerning syphilitic and iodic purpura. He especially referred to cases of the former recorded by Wilson Fox, Bälz, and Behrend, and others observed by himself. As regards iodic purpura, he alluded to the writings of Fournier, Van Buren, Bradbury, and Sydney Ringer, and to cases he had himself seen. His conclusion was that in his case the fatal purpura was due to the iodide of potassium, though the syphilitic dyscrasia under which the patient was labouring may have contributed to the result.

CLINICAL SOCIETY OF LONDON.

Anomalous Form of Herpes.—Cancer of Tongue.—Gastrotomy for acute Intestinal Obstruction.—The Incubative Period of Scarlet Fever.—Sudden Death after Tapping of an Hydatid of the Liver.—Œsophagotomy.

THE last meeting of the Society for the session was held on the 24th ult., Mr. Callender, President, in the chair. It will be seen that an unusually large amount of business, of a very interesting character, was transacted.

The PRESIDENT communicated the substance of a paper by Dr. Day, giving the sequel of a case of Lymphatic Elephantiasis recorded by him in one of the early volumes of the Society's Transactions. The patient lived nine years since that date, in feeble health, and at last sank and died. The post-mortem examination made by Dr. W. Legg, and the microscopical examination of the tissues by Dr. Gowers, did not throw any new light upon the nature of the case.

Dr. SANGSTER showed a little girl with a curious Skin Eruption, which commenced six months ago as a circumscribed erythematous patch on the back of the hand, with rapid exfoliation of the epidermis, and subsequent exudation and incrustation. The child had been under observation during the whole of this period, new patches coming out in fresh spots as the old ones faded. The areas involved followed distinctly the course of nerve-trunks; and whereas the right half of the body was first affected, it is now the left extremities that are the seat of this creeping eruption. The duration of each patch was about ten days. Dr. Sangster said that the affection was evidently neurotic, and he had regarded it as a form of herpes stopping short o vesiculation.—Dr. IRVINE saw the case when it was in the Charing-cross Hospital, and could confirm all Dr. Sangster had said about it. Its resemblance to the effects of superficial burns or scalds had suggested that it was possibly artificially induced; but observation showed this could not be the case.

Mr. GEORGE BROWN read the sequel of a Case of Cancer supervening on Ichthyosis Linguæ, reported in vol. 10 of the Society's Transactions. The tongue was excised in November, 1876, and seven months after the operation the stump was attacked with cancerous ulceration, which spread rapidly, notwithstanding the application of various forms of caustic. Some troublesome hæmorrhage occurred about six weeks later, and threatened the life of the patient; but the daily application of a strong alcoholic solution of tannic acid (six drachms to the ounce) had a marked effect in checking the ulceration, and the hæmorrhage did not recur, although the patient lived some months longer. Mr. Brown believes that the alcoholic solution of tannic acid will be found to be very useful in uterine cancer, and in ulcerations of a sluggish and unhealthy character generally. In August, 1877, the cervical glands, which had been indurated for several months, began to enlarge, giving rise to a good deal of difficulty in swallowing. The patient gradually became weaker as the glands continued to enlarge, and he died from exhaustion on January 31st, 1878, fourteen months after the operation for removal of the tongue. During the last two months of his life almost the only nourishment he took was brandy and milk. Large doses of morphia were given to procure freedom from pain.

Mr. CRIPPS read notes of a Case in which Gastrotomy was performed for Acute Intestinal Obstruction. The patient, a thin, anæmic boy, aged seventeen, five months ago received a blow on the abdomen, causing intense pain, but from which he quite recovered in a day or two. After this blow he was much troubled with constipation. Five days before admission into the hospital, whilst bending over, he suddenly experienced intense pain in the right iliac fossa. The next day vomiting set in, which became fæcal on the fourth day. On admission into the hospital the abdomen was slightly distended, not painful on pressure; the vomiting was almost constant. Injection, inversion, &c., failed to give relief. The patient was then given twenty-five drops of opium and a hot bath. After this he expressed himself as much relieved. Vomiting entirely ceased, and he slept for several hours. This improvement lasted nearly twenty-four hours, but on the following evening fæcal vomiting set in again more obstinately than ever, and the patient appeared to be sinking. It was then decided to open the abdominal cavity. This was done under carbolic spray by an incision three inches long in the middle line. The finger introduced into the opening failed to detect any obstruction. The bowel was then gently drawn out from the lower portion of the wound, and passed in again at the upper in such a way that only a few inches were exposed at a time. After several feet of gut had been examined in this way, a portion of the lower part of the ileum was found tightly strangulated by a fibrous band thrown across from the termination of the ileum to the parietal layer of the peritoneum covering the psoas muscle. The bowel was easily liberated, the abdominal wound closed and covered with Lister's dressing. All vomiting ceased, and six hours later the patient had a copious fluid motion. The patient did well for the first few days, when obstinate

diarrhœa set in, and death took place from exhaustion on the eighth day. There was no rise of temperature or tenderness of the abdomen, and the post-mortem examination showed no trace of peritonitis. Before admission the patient had taken large doses of purgative medicine. Attention was drawn to the ease with which the bowel was returned into the abdomen by only drawing out a few inches at a time. It is a matter of regret that opium had been given, and this probably had much to do with the fatal issue. The symptoms at the time were completely smothered by the narcotic, twenty-four precious hours thus lost, and the operation ultimately performed upon a patient whose vital energy had slowly sunk below a possible rallying point.—The PRESIDENT said the case was an extremely interesting one, and had been ably told. Many must have had experience of such cases, and to them it was of the greatest importance that a decision should be taken, involving, as it did, the performance of a serious operation to relieve the patient from a condition which otherwise would be certainly fatal.—Mr. MARSH thought the method pursued by Mr. Cripps to find out the seat of obstruction was very valuable. In one or two cases of death after gastrotomy for intussusception, the fatal result seemed to be due to laceration of the mesentery in pulling out the intestine. He had lately seen Mr. Smith adopt Mr. Cripps's plan in a somewhat similar case, and he was struck by the ease with which the obstruction was found without the necessity for returning all the intestines at once. In that case death occurred from exhaustion due to vomiting three or four hours after the operation.—Mr. BROWN said the operation should be more frequently resorted to, but it was difficult to carry it out in private practice. He did not think the danger from opening the abdominal cavity to be very great, and he related a case of abdominal tumour in which he had explored the peritoneal cavity without ill effect.—The PRESIDENT pointed out that the great need was to have distinct evidence of the character of the obstruction. All must have seen cases of acute intestinal obstruction, and have been in doubt as to the time at which interference should be practised; for occasionally all the symptoms may disappear in a short time. Quite lately he had seen a case in which gastrotomy was urged, and yet, by putting the patient on opiates and practising large injections, the symptoms of strangulation were relieved, and the case did well. The occurrence of such cases should point to caution in proposing the performance of such an operation.—Mr. CRIPPS, in reply, submitted that the question lay between the danger of waiting and the danger of operating. There were no statistics to guide one as to the frequency with which cases got well if left alone. The present case was interesting in the history of an accident preceding the obstruction. Mr. Gay states that in one-third of the cases of obstruction due to bands there is a history of previous injury.

Dr. MURCHISON then read an abstract of a paper upon the Incubative Period of Scarlet Fever and some Allied Diseases. The paper contains the result of observations in seventy-five cases of scarlet fever, extending over a period of twenty years. The period of incubation is defined as the time elapsing between the date of the poison entering the system and the first manifestation of symptoms. The importance of the knowledge of the duration of this period is manifest, and its meagreness at present is notorious, since in none of the specific fevers have writers been able to give anything like a fixed period. Even in small-pox the incubative period is by no means fixed; it is said to be about twelve days when taken in the ordinary way, and seven days when received by inoculation. Some instances of this are given, and also a few of varicella and of measles, the incubative period of the latter being about ten days. The paper also gives some facts about whooping-cough, and offers further evidence as to the conclusions regarding typhus fever in addition to those published some years ago by the author in St. Thomas's Hospital Reports. Enteric and relapsing fevers are also dealt with, and the conclusion is arrived at that in none of these diseases is there a fixed period of incubation, and the broad distinction is drawn between those specific fevers having a *long* and those with a *short* incubative period. To the former class belong variola, varicella, measles, typhus, enteric and relapsing fevers, and mumps; to the latter, erysipelas, diphtheria, dengue, and scarlet fever. Passing to the special subject of scarlet fever, Dr. Murchison said that different authorities gave the incubative period at times varying from two days to a month, but many of these statements were made on isolated facts. He had himself published in THE LANCET for 1864 an analysis of twenty-three cases, in none of which was this period longer than one week. The present paper includes seventy-five cases, two of which Dr. Murchison referred to as being very striking examples of the shortness of the incubative period. In the one this period certainly could not have exceeded eighteen hours, and in the other—a case in which a number of children on board a steamship between Australia and Suez contracted the fever within four days of the exposure to infection—the first two children were attacked within twenty-four hours. In the epidemic of scarlet fever among guests at a dinner-party at the West-end, a few years ago, the period of incubation in all those attacked was less than five days. These and other details were given by Dr. Murchison, with the general conclusion that of the total number of seventy-five cases, in not one did the incubative period exceed six days, in forty-four it did not exceed four days, in sixteen it did not exceed two days, and in fifteen not twenty-four hours. Dr. Richardson's personal experience of the almost instantaneous effect from exposure to the poison, and the case recorded by Trousseau of an incubative period of seven or eight hours, and other recorded instances of extremely short incubative periods, are given. The practical outcome of the paper is to establish the rule that if, after exposure to the scarlet fever virus, a person be subjected to a week's quarantine, and do not show symptoms of having been infected, he is safe. This rule the author had observed himself, and had never found it to fail. The paper concludes with a few observations on the duration of the contagium virus; and also on the question whether it be possible during the incubative period for a patient to communicate the disease, some cases of small-pox being given which rather make this probable.—The PRESIDENT said the communication was a very important one, and would attract considerable attention.—Dr. WILBERFORCE SMITH suggested that there might be different varieties of the same virus, which would have different periods of development.—Dr. CROCKER referred to an outbreak of scarlet fever in a children's ward in which, in the majority of cases, the incubation lasted about four days, but in one case it seemed to be eight days. He mentioned also a case of enteric fever with an incubative period of only three days.—Mr. G. BROWN gave details of a case of presumed scarlet fever in which there seemed to be a clear history of a nine-days' incubation.—Dr. MURCHISON, in reply, said that differences in the intensity of the fever &c. appeared to depend more upon the individuals attacked than on the existence of any separate varieties of the same fever. Several instances of very short incubation in typhoid are on record.

Mr. BRYANT read notes of a case of Sudden Death after the Tapping of an Hydatid of the Liver. The patient was a man aged forty, who for three years had had a steadily enlarging tumour on the right side of his abdomen, which had produced no other symptoms than those caused by its size. It occupied the right hypochondriac, epigastric, and lumbar regions, and extended across the median line of the abdomen for about two inches. On January 21st, 1878, a small trocar and cannula not larger than a silver probe were introduced into the tumour, and nine ounces of clear hydatid fluid drawn off. The puncture was made below the ribs on the right side, and enough fluid was withdrawn to relieve the tension of the cyst, but not to empty it. The operation caused no pain or distress. The cannula was then withdrawn, when in less than a minute the man's face became scarlet, and he was seized with an agonising pain in his jaws. This was succeeded by a death-like pallor, vomiting, stertorous breathing, and death in five minutes. After death an immense hydatid cyst the size of a man's head was found beneath the liver, full of fluid slightly blood-stained. The portal vein was in front of the cyst, and the trocar had passed through one of its large branches. The brain and lungs were healthy. The heart on both sides contained uncoagulated purple blood in small quantities, and was healthy. The inferior vena cava was much obstructed by the cyst, and its walls were adherent to a very considerable extent, although there was room for a passage of blood. No opinion was given as to the cause of death in this case, although the symptoms were those of nerve-shock. It should be added that no air could have entered the bloodvessels through the cannula.—Dr. MURCHISON said that the accident, although rare and important, was not unique. Two cases had recently been recorded of rapid death after tapping of hydatid cysts. In one case the patient survived the operation eighteen hours; some peritonitis had already set in. The other case, which was quite parallel to Mr. Bryant's,

would be found abstracted in the *London Medical Record* for 1875 (p. 389). The case was recorded by M. Martineau, and death took place within twenty minutes of the operation. There was no sign of peritonitis in this case.

Mr. MACCORMAC read a paper by Dr. McKeown, of Belfast, on a Case of Œsophagotomy. The patient, Mrs. G——, of Glenary, in the County Antrim, consulted him on January 16th last. Three weeks previously she had swallowed a set of false teeth, which stuck in the œsophagus. Various attempts had been made to displace it, but without avail. By palpation a body could be felt at the lower part of the neck on the right side, and by passing a whalebone with a smooth metallic end down the œsophagus the diagnosis of the presence of a foreign body was confirmed. The patient being able to swallow sufficient fluid to keep her alive, and the body being just within reach of forceps, Dr. McKeown did not propose œsophagotomy till all other measures had failed. By manipulation on the outside, the body was moved from the right to the left side, and seemed to have been pushed upwards. On two occasions it had been seized firmly by long, strong œsophageal forceps. On the second occasion most alarming symptoms showed themselves. The plate had been so firmly grasped that it might have been extracted had it been at all possible. The plate could be moved easily from side to side, but when traction was exerted to bring it upwards, the patient became livid, respiration seemed to cease, she could not speak, the tongue protruded from the mouth, and the eyes stared. It seemed as if tracheotomy would be necessary; but, fortunately, on relaxing the grasp and removing the forceps, all the symptoms quickly abated. All further attempts at extraction by the mouth were definitely abandoned, and œsophagotomy was performed on January 28th by Dr. McKeown, assisted by Drs. James and John Moore and Dr. Johnston. The incision was made on the left side, and extended along the groove in front of the sterno-mastoid from a point about opposite the middle of the thyroid cartilage to near the sternum. The cervical fascia having been cut, the carotid sheath with its contained vessels was carefully separated (chiefly by the handle of the scalpel and director, scissors and knife being occasionally used to cut resisting bands of fascia) from the laryngeal muscles, the thyroid body, trachea, and œsophagus. The œsophagus was then opened as freely as possible, but much trouble was experienced in removing the plate because of its size, its inequalities, and hooks. The plate could neither be moved up nor down, because of the hooks, and it was only by rotating it that it was at last freed and extracted. The plate was found to be situate entirely in the œsophagus, at its beginning, the long diameter being vertical. The patient made uninterrupted progress. She was fed for a week by the stomach-pump tube. On the seventh day the œsophageal wound was healed, and on the fourteenth day the whole wound was closed. The wound was kept scrupulously clean by syringing with solution of Condy's fluid, and also by causing the patient to swallow frequently a little weak whisky and water with chlorate of potash, so that a part might pass from within outwards, whilst the œsophageal wound was open. On leaving town the patient could swallow quite well, and her speech was quite unimpaired. Dr. McKeown concluded by remarking that had he known beforehand the shape of the plate he would not have so long persevered in attempting to extract by the mouth, but should have operated at once. He thinks the operation should be more frequently performed than it is. The plate had three incisor teeth attached, and a place for a fourth.—The PRESIDENT said the Society was much indebted to Dr. M'Keown for his communication. He had seen the operation performed three times. One of the cases was under the care of the late Mr. Stanley. It was that of a man in the prime of life, who had swallowed a piece of bone. Attempts at its extraction by the mouth having failed, Mr. Stanley at last resorted to œsophagotomy, but the foreign body had already made its way into the mediastinum, and caused extensive suppuration, the patient dying from the abscess bursting into the pleural sac. In another case, a fishbone worked its way into the aorta.—Mr. BRYANT said the case showed the impropriety of exerting too much force in attempts at extraction of foreign bodies from the gullet, and he referred to a case in which the œsophagus was ruptured in such an attempt.—Mr. CRIPPS related a case in which a small fishbone was swallowed. Some pain was felt for a week, but no other inconvenience, when suddenly, a short time after, severe pain occurred, followed by a gush of blood from the mouth and rapid death, which was found to have been due to the bone having perforated the œsophagus and caused ulceration of the carotid at its bifurcation.

The Society then adjourned till October.

PROVINCIAL MEDICAL SOCIETIES.

NORWICH MEDICO-CHIRURGICAL SOCIETY.—The seventh meeting of the Society was held at the Norfolk and Norwich Hospital, May 7th, 1878, Joseph Allen, Esq., President. An elaborate and extensive series of drawings, illustrative of different diseases of the tongue, were exhibited, and notes read of the cases these drawings were intended to portray. This collection was sent for exhibition by Jonathan Hutchinson, Esq.—Dr. COPEMAN read a paper on the treatment of severe Vomiting in Pregnancy. He advocates a mode of treatment which he has found eminently successful, and experience in the hands of others has been attended with the same unfailing result. It consists in carefully dilating the os uteri with the finger. The details of five cases are given in which this plan of treatment was attended with complete success.—Dr. BATEMAN read a paper entitled "Does Loss of the Power of Articulate Language occur unaccompanied by any other form of Paralysis?" (a point disputed by Dr. Wilks). Dr. Bateman believes very decidedly that loss of articulate language frequently occurs as a sole and unique morbid symptom; and he has recently had under his care in the Norwich Hospital a case which illustrates very strikingly the truth of his view. He also cites the case of Professor Rostan in support of his doctrine, also instances recorded by Dr. Jackson, of Pennsylvania, and Professor Trousseau.—Dr. BEVERLEY read a paper on German Measles, in which the subject was treated in an exhaustive and complete manner. He proved that it is the mildest of the exanthems, and requires the simplest form of treatment. It has prevailed very extensively in Norfolk during the last few months.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.—At the meeting on May 1st, Dr. G. BALFOUR showed a well-marked case of Athetosis in a little girl aged three years. There were twisting, extending, and rotating movements of the right hand and foot, ceasing during sleep, and excited by rubbing the affected limbs. The case had improved under treatment by ergot, but Dr. Balfour stated that should all other means fail he would resort to trephining over Ferrier's fifth or sixth parietal spot.—Dr. ANDREW showed a spleen weighing 13½ oz. from a female child eighteen months of age; there was great anæmia present during life. He also showed a specimen of multiple cerebral tumours in a boy eight years of age.—Dr. BYROM BRAMWELL exhibited several forms of aneurism, and a cystic tumour from the anterior mediastinum of a syphilitic subject.—Dr. KIRK DUNCANNON exhibited an apparatus in which the electric telephone is used as a means for testing the hearing with a fixed source of sound placed in a distant room; the sound conveyed to the ears of the patient is increased or diminished by diminishing or increasing the known fixed resistance. In this way a formula may be constructed for indicating the degree of deafness present in a given case.—The discussion on Dr. ANGUS MACDONALD'S paper was resumed. Dr. Grainger Stewart said the lesion of the kidney described was a new one, in that colloid changes only existed, and no inflammatory changes, as might have been expected. The state of the nerve-centres confirmed the hypothesis of vaso-motor irritation being the cause of the convulsions in uræmia.—Dr. Underhill said the convulsions were due to anæmia of the brain-centres.—Dr. G. Balfour pointed out that in some cases the blood is subject for years to contamination by urea, without any convulsion occurring.—Dr. Wylie thought the post-mortem evidence, and especially the exudation of leucocytes into the medulla, pointed rather in favour of the bloodvessels being dilated and not contracted. Some of the changes described might have taken place during the time (fifteen hours) which elapsed between the last fit and the death of the patient.—Dr. Hamilton said that when a uriniferous tube was obstructed its epithelium underwent a colloid change; and he asked whether the lesion in the brain preceded that in the kidney. Anæmia of the kidney was produced in the rabbit by irritation of the vaso-motor centre. In five cases of chronic idiopathic epilepsy he had found de-

generation of the olivary bodies. — Mr. Benj. Bell referred to Astley Cooper's observations on the production of convulsions by ligature or compression of the carotid.—Professor Simpson said that although this view of its pathogeny might be correct, yet the treatment of puerperal eclampsia would remain the same.—Dr. A. Macdonald replied.

Reviews and Notices of Books.

Outlines of Physiology in its relation to Man. By JOHN GRAY M'KENDRICK, F.R.S.E., Professor of the Institutes of Medicine in the University of Glasgow. pp. 750. Glasgow: Maclehose.

THIS work, published by an able experimenter and teacher, adds one more to the already numerous manuals for students, and may fairly be taken to represent the present condition of physiology, and to offer in a condensed form the product of the teacher's own observation and reading.

In judging a text-book of this kind, we must first examine what the author considers it requisite a student should know; and secondly, see how he places that knowledge before him. It has long been quite obvious, and is becoming more so day by day, that the ordinary student cannot in the time at his disposal acquire a thorough knowledge of the entire round of physiology. There are facts which, though of importance in themselves, and worthy of the most careful and persistent research, are yet so indirectly connected with practice that they may safely be placed on one side during the ordinary curriculum, to be taken up at a subsequent period if the student have emulation enough to lead him to the higher and more honourable degrees that are open to him in all the best examining bodies. There are other parts, again, with which every student should be familiar, since they constitute the basis of medical knowledge, and because without acquaintance with them it is impossible that he can either practise his profession with credit, or even understand the principles upon which the treatment he pursues is founded. Amongst the former class of facts, we may mention those which deal with the electrical phenomena of bone and muscle, the more recondite functions of the sensory apparatus of the eye and ear, and the development of the several organs and tissues; whilst amongst the latter must be included the phenomena of the digestive, absorptive, circulatory, and respiratory apparatus. Dr. M'Kendrick appears to us fully to recognise this cardinal requisite in a students' handbook, and to supply only those details which may be regarded as being of primary importance. His large experience as demonstrator in the University of Edinburgh has familiarised him with his work, and has enabled him to meet the difficulties experienced by the beginner by a plain and easy style of exposition, and by avoiding the too frequent use of technical words and phrases.

The distinctive features of the book are the excellent descriptions of apparatus and methods of experimental inquiry, and the illustrations of these that are given under each head. Taking one example, that of the heart, we find accounts and illustrations, in succession, of Marey's cardiograph; of the recording apparatus required to register the tracings of the cardiograph; of Coats' apparatus for studying the movements and pressure of the heart; of Marey's apparatus for measuring the changes of volume of the heart in systole and diastole respectively; and numerous tracings. Each of these is briefly—in some instances, we think, too briefly—described; but, on the whole, the student who reads attentively will learn all that is necessary for him to know.

There are one or two points that are open, we think, to criticism. Dr. M'Kendrick states in his preface that he has avoided the discussion of minute anatomical and histological details, because he regards this as belonging more especially to the province of anatomy; yet, on looking through the several chapters, we find he prefixes, in the description of each tissue, an account of the coarser structure, whilst the minuter details that are generally regarded as requiring explanation in a physiological work are omitted. It appears to us that in this way many pages are unnecessarily lost. Take, for example, the liver. The very superficial account of the vessels, cells, and ducts of the liver is useless as conveying information to the student, whilst it occupies a page that might have been employed in giving a clear description of the arrangement of the cells and ducts. The same may be said of the spinal cord, retina, auditory apparatus, muscle, bone, epithelium, and many other tissues or organs. It may appear bald to plunge at once into the physiology of a subject if it is presupposed that the minute anatomy is known, but it is obviously superfluous to mention only the coarser features of anatomy. A good point about the book is that at the end of each section the student is referred to the best treatises and memoirs upon it; and these, as a rule, seem to us to have been carefully selected.

We would suggest also some minor alterations of arrangement. The chapter on Muscle is interrupted by a section extending over twelve or thirteen pages on the Measurement of Short Intervals of Time. This should have preceded the account of muscle, which would then be read continuously. Cartilage and Bone might with advantage, as being simpler tissues, been made to precede Muscle, which would then have joined on to Nerve.

We are surprised to find that Dr. M'Kendrick refers the first sound of the heart to the muscular sound, and scarcely admits, if he admits at all, that it results from valvular tension. The evidence in favour of the latter view is, we think, quite irrefragable, for it can be demonstrated by experiment, it is in accordance with all analogy, and it is supported by pathology; whilst some objections may be raised against the former. Notwithstanding that we entertain differences of opinion from Dr. McKendrick on this and some other subjects, they are, we are bound to say, on points that are fairly open to discussion; and we have much pleasure in recommending his book to the working student.

St. Bartholomew's Hospital Reports. Vol. XIII. 1877. Edited by W. S. CHURCH, M.D., and ALFRED WILLETT, F.R.C.S.

THE present volume of these Reports fully maintains the character of former years. It contains no less than twenty-seven papers, many of which are of considerable value and interest, and the greater number contributed by members of the staff. We may point out first, lest it should be overlooked, the very thoughtful and learned Address to the Abernethian Society, by Dr. Gee, which is worthy of a more conspicuous position, and deserves careful reading. Dr. Gee also contributes three short papers on Chronic Pneumonia in Disease of Bronchial Glands, on Spastic Paraplegia, and on Polydipsia. Dr. Wickham Legg has two papers, abounding with authorities, on the Essential Phenomena of Jaundice, and Cases of Diseases of the Liver. Dr. Champneys contributes a very complete account of a case of Extroversion of the Bladder, and another of Fibroid of the Uterus. Space forbids our commenting on, or even noticing, the many other papers of interest. The last paper, one by Dr. Brunton and Mr. D'Arcy Power, on the Albuminous Substances which occur in the Urine in Albuminuria, is perhaps the most important and original of all. The authors show that the source and forms of the albumen vary in different cases and at different times, and their observations point to a much wider and more precise knowledge of the pathological relations of albuminuria in the future, and hence an increased power of treatment. The Medical and Surgical Reports, the former by Dr. Champneys, the latter by Messrs. Butlin and Macready, are very elaborate; and the appendix to the Medical Report, containing a digest of cases, is especially good.

Transactions of the American Neurological Association for 1877. Vol. II. New York: Putnam. 1877.

THIS volume contains the proceedings of the third annual session of an association which, although numbering less than forty members, shows evidence of an activity seldom exhibited by much more imposing bodies. The papers include a contribution to the study of localised cerebral lesions by Dr. Seguin, and the discussion arising thereon is printed in the proceedings at the commencement of the volume. It is of interest to find that differences of opinion exist among transatlantic authorities as to the conclusions of Ferrier and Hitzig, just as they do among us, but the mass of evidence and the balance of authority are in favour of the localisation theories. Dr. Hammond contributes a paper on the "Odour of the Human Body as developed by certain affections of the Nervous System"; Dr. Dupuy writes on Hereditary Epilepsy, and on the Seat of Vaso-motor Centres. The subject of Tetany is dealt with by Dr. M. B. Emerson, and that of Athetosis by Dr. Jewell. These, however, are only a few of the papers of considerable merit and value which are comprised within the two hundred and odd pages of the book.

OUR LIBRARY TABLE.

The Quarterly Journal of Microscopical Science. April, 1878. No. LXX. London: Churchills.—This number contains some excellent papers, the first being by F. M. Balfour, and containing a very interesting account of the phenomena accompanying the maturation and impregnation of the ovum, throwing much light on the destination of the germinal vesicle and spot, obtained from the observations of V. Beneden, Bütschli, Hertwig, Strasburger, and others. The second is a note by Mr. E. A. Schäfer on the Structure and Development of Osseous Tissue, to which is appended a letter from Dr. Sharpey, containing some historical references to the perforating fibres of bone, sometimes called Sharpey's fibres. The third is a paper by Mr. Sydney Vines, on recent researches into the Nature of Lichens, all of which appear to support the theory of lichens being the result of a parasitic growth of algæ upon fungi. The fourth paper is by Mr. D'Arcy Power, on certain points in the Structure of the Common Earthworm, chiefly bearing on the endothelium of the body cavity and bloodvessels. The fifth is by Mr. J. C. Ewart, giving an account of the Life History of Bacillus anthracis, which we shall notice elsewhere. The sixth is an experimental contribution to the Etiology of Infectious Diseases, with special reference to the Doctrine of Contagium Vivum, by Dr. E. Klein. The seventh and last original article is by Professor Lister, on the Nature of Fermentation.

On the Indications for the Use of the Trephine, derived from Cerebral Localisation and the Relation of the Cranium to the Brain. By Dr. SAMUEL POZZI. Translated by THOMAS M. DOLAN.—This is a paper which appeared a year ago in "Les Archives Générales de Médecine," in which, after describing the external convolutions of the cerebrum, the author gives Ferrier's views on the localisation of the centres for voluntary movements, and Broca's rules for cranio-cerebral topography. And here he stops short, and has to assert that the time has not yet come for physiology to guide the surgeon, but that at present it is physiology which is awaiting facts from clinical records by the surgeon.

The Laws of Health. A Lecture. By WALTER RIGDEN, M.R.C.S. 1878.—This lecture of Mr. Rigden's serves to show, what is every day becoming more apparent, that all classes of society are anxiously striving to be guided by scientific rules in their daily life. The lecture was delivered in the National Schools, Brompton, in which neighbourhood the author is residing; and it is another instance of the readiness with which the professors of the healing art impart the necessary knowledge of keeping well to those whose diseases should fill the doctors' pockets. Mr. Rigden brings home the desirability of vaccination very forcibly to his audience. "What is the value of a young woman who is marked with small-pox? Will she get a good situation as a domestic servant? No. Is she likely to get a husband? No. Would she be taken on at any shop or restaurant? No. She must go out charing or washing, or go to some factory. Very much the same can be said of a man. Who would like a man marked with small-pox as a coachman, a footman, or a butler?" Mr. Rigden deals with all the more prominent sanitary questions in a forcible and pleasant manner.

Hydro-Incubation in Theory and Practice. By THOMAS CHRISTY, F.L.S. London: Christy and Co. 1878.—This pamphlet is a statement by Mr. Christy of the success which may be obtained in poultry hatching and rearing by the use of his apparatus, which is at once ingenious and simple, and is so contrived that the temperature of the eggs may be constantly maintained at 104° F. Time was when the theory was maintained that there were several varieties of heat, and that the heat which proceeded from a sitting hen, and which ultimately produced the live chickens from the egg, was essentially different from that which was obtained by the consumption of combustible materials. Mr. Christy and his predecessors in the science of artificial incubation have quite disposed of all such theories. There is no doubt that poultry farming obtains too little attention in this country, and that the English are far behind the French in the matter of scientific poultry culture.

Our Debt and Duty to the Soil. By E. D. GIRDLESTONE. London: Hamilton, Adams, and Co. 1878.—This is a little sixpenny pamphlet in which the sewage question is dealt with in a popular and even in an elegant fashion. It might lie upon every drawing-room table, and we hope it will do so on many, for it is only by disseminating widely and in an attractive form those scraps of science which enable us to understand the cycle of changes constantly going on between plants and animals, that we can hope to see sounder views generally held by those who constitute local boards and sanitary authorities. Mr. Girdlestone insists most strongly on the fact that there is only *one* thing to be done with sewage—viz., to place it upon the soil for manure, and that if man wishes to be at once healthy and wealthy he must imitate

> "The grateful sheep, who eat the grass
> And dung the ground for more."

An Invalid's Pastime. By ARCHIBALD CAMERON. Wyman and Sons. London. 1878.—This is a volume of poems written by a bedridden patient in the Highgate Infirmary. The author, who has no small skill in versifying, states that he "ventures before the public, not in the character of one aspiring to fame, but with the less noble aspiration of deriving, if possible, some small pecuniary benefit from his labours." We wish the author all success, and give our readers, as a sample of his sonnets, a stanza from an ode to "Rheumatic Gout," the disease from which the poet suffers. He thus sums up his opinion of the treatment of the disease:—

> "Try lemon-juice or colchicum,
> Unsweetened gin, or Bahia rum,
> Or with gout pills your stomach cram,
> Or mustard-seed:
> You might as well just suck your thumb—
> You won't succeed."

The Magazine of Art (Cassell, Petter, and Galpin) is a publication of which we must see more than two numbers to form an opinion. The field the periodical essays to occupy is wide, and, as yet, almost unexplored. The impression produced by the first two numbers for May and June is favourable. The publication is well got up.

The Gardener's Chronicle for May, 1878 (W. Richards), comprises a large amount of information, valuable to professional and amateur gardeners, and interesting to all. It is admirably illustrated.

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THE LANCET.

LONDON: SATURDAY, JUNE 8, 1878.

MEDICAL BILL No. 2 is now before the House of Commons, and may be taken to represent the opinion of those who see in the Bill of his Grace the Duke of RICHMOND and GORDON a great evil which ought to be remedied when so many other evils are being dealt with. When an amending Bill is brought in by a powerful Government, in which a conspicuous and urgently needed amendment is left out, it is little comfort to those who wish to see it enacted to be told that this is not the occasion for enacting it. It will not be the fault of the authors of Bill No. 2 if the whole attempt at medical legislation for the session should fail. The constitution of the General Medical Council has been long known to be a hindrance to the progress of medical education. The members of the Council are individually men of the greatest merit. But they live in the regions of consulting practice. They are little familiar with the exigencies of general medical work. The late Dr. STOKES—than whom there has been no more respected member of the Medical Council—once said at the Council Board that he had never been in the chamber of a lying-in woman. On these accounts it may easily be understood that the Council is defective as a Council of Medical Education, which is its primary function. That it is so is proved by two facts. First, that only last year—that is, after nearly twenty years' existence—did it seriously debate the methods of medical education; and, so far as we know, the discussion has not added a tutor nor subtracted a lecture. The second fact which seems to prove that the Council is ineffective as a Council of Medical Education is that the results of medical examination are discreditable to the state of medical education, which appears to make no progress proportionate to the growth of general education and to the demands of the public. Our explanation of this is that the Council represents far too predominantly the Corporations, and even the Universities, which are wedded to old forms of teaching and averse from changes that are needed. The Government cannot be surprised, under these circumstances, to see a clear demand made for a change in the Medical Council, and for the change to be made now. The more convenient time for passing such an enactment will not come. The profession has little power with the Corporations and the Universities, to the representatives of which, constituting the Medical Council, the Government always appeals when changes affecting medical education are contemplated, with a strange forgetfulness that, as deeply interested parties, they are very indifferent witnesses.

The strength of Medical Bill No. 2 is that it introduces independent medical men, familiar with the exigencies of practice, into the Medical Council. In addition to Crown members, and all the existing representatives of Universities and Corporations, it proposes to introduce "six persons to be elected from time to time by the registered medical practitioners resident in the United Kingdom, four of whom shall be elected for England, one for Scotland, and one for Ireland," the election to be by voting papers sent out by the Registrars of each Branch Council to each registered medical practitioner resident in his part of the United Kingdom. The Bill is endorsed by Mr. ARTHUR MILLS, Mr. CHILDERS, and Mr. GOLDNEY—names which represent both parties in the House of Commons, and which are not likely to be seen in support of impracticable propositions.

We regret to see that Medical Bill No. 2, by its method of securing direct representation of the profession, adds to the number of the Council, which is already large enough. Surely the time has fully come when Corporations can combine to elect a representative, as the Scotch Universities, with their far larger interests and responsibilities, have to do. The conjunction of bodies should carry with it a conjunction of representation. Medical Bill No. 2 provides that if the medical authorities in each part of the United Kingdom fail by a certain time to submit schemes for establishing medical examining boards, "the General Medical Council shall themselves frame and propose to the Privy Council a scheme for the establishment of the Medical Examining Board for that part of the United Kingdom." It follows the excellent lead of the Government Bill in assigning to the Medical Council the duty from time to time of framing rules for regulating the examinations under the Act, the course of professional study, and of reporting to the Privy Council any medical examining board which fails to comply with the examination rules or schemes in force under the Act. It will be remembered by the Duke of RICHMOND that the Medical Council declines this important function, or wishes to do so. But, though it will certainly add much to its duties and its responsibilities, it is but right that it should undertake the work. The fact that it will have to do so is a very strong additional reason for importing into the Council a certain number of medical men who have no Corporation interests to serve, and who will look simply to the supreme demands of the public and of medical practice. The Government Bill is passing rapidly through the Upper House. The profession should lose no time in organising its representation on the subject. It should be possible to arrange a compromise between Bill No. 2 and the Government Bill; but if the Duke of RICHMOND will give no promise of amendment in the constitution of the Council, legislation had better be deferred.

THE epidemic of diphtheria which has now for several weeks been fatally prevailing in the north-western districts of the metropolis has assumed proportions which have given rise to general alarm in the infected localities. Indeed so great is this alarm that the inhabitants have appealed to the Government for assistance, and, under instructions from the Local Government Board, Mr. W. H. POWER, one of the medical inspectors of that Board, has been directed to make an inquiry with regard to the circumstances under which the epidemic has arrived at its present development, and to give such assistance to the local sanitary authorities as may be indicated by the result of his investigations. Mr. POWER—who was one of the inspectors engaged in carrying to a successful issue the very complicated special inquiry concerning the

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outbreak of typhoid fever in Marylebone in 1873, due to infected milk—is already at work in the localities where diphtheria is and has been most prevalent; and we hope that he will be not less successful in bringing this inquiry to a satisfactory issue than he was in the inquiry to which we have just referred.

The epidemic of diphtheria which is now prevailing in the north-western districts of London is part of the greater epidemic of the same disease which since the beginning of the year has been prevalent throughout the metropolis.

Of the twenty-one weeks of the present year the mortality records for which, in the metropolis, are available for use at the time we write, in all, with the exception of five, the deaths from diphtheria ranged above the average of the corresponding weeks of the previous ten years. In the second, fifth, and sixth weeks the deaths were in excess, and after the seventh week this excess continued in each successive week to the present time. The mortality from diphtheria during the twenty-first week was no less than four times the average. The incidence of the mortality of the five months just expired has differed greatly in different parts of the metropolis; in other words, the prevalence of fatal diphtheria within the metropolitan area has up to the present been very unequally distributed. During the earlier stages of the epidemic the districts south of the Thames appear to have suffered most. Latterly the districts of northern London have principally suffered, while the western, eastern, and central districts have as yet been but slightly affected. Indeed the central districts of the metropolis have scarcely felt the effects of the epidemic.

In the northern districts the disease has been almost wholly centered in Hackney and Islington in the east, and in Hampstead and Marylebone in the west; but in the two last-named districts it has fallen with double the force that it has exhibited in the two first-named, and in Hampstead it has displayed either an exceptional degree of prevalence or a malignancy (it is not yet certain which) that will probably prove unique in the history of the disease in the metropolis. It is this peculiar local prevalence or malignity in Hampstead and coterminous parts of Marylebone which forms the special subject of the official inquiry now in progress. The localities mainly affected are the district of Belsize-park and the neighbouring parts of St. John's-wood. Part of Kilburn, however, appears to be included in the area of peculiar prevalence. The cases have been distributed within the practices of so many medical men that even an approximate estimate cannot yet be made of their number, but it is remarkable that the greater number appear to have occurred among the families of people in easy circumstances in each locality. A fatal case of diphtheria was recorded in Hampstead in the fourth week of the year, but it was not until the middle of March that the disease appears to have displayed any unwonted prevalence. About this time, however, or soon afterwards, a manifestation of the malady seems to have occurred which is best described by the expression explosive, and which especially involved the particular localities in Hampstead and Marylebone which have been named. At first this alarming outbreak was attributed to the effluvium from a dust-heap in the vicinity of the houses first attacked, afterwards suspicion was directed to the probability of its depending upon some local disturbance of the drainage, but latterly, the cases having been observed to fall mainly within a particular milk-walk, a belief has gained ground that the explosion was in some way connected with the milk supplied in this particular walk. The question of dissemination by infection through intercourse between the infected and healthy families, or between children, seems in this case, from the social condition of the families, to have hardly a place. It will be for Mr. POWER to determine which, if any, of the several causes of peculiar local prevalence here suggested has been effective in producing it. Meanwhile it is to be feared that mischief will still be wrought by the large amount of infective material necessarily developed in the recent explosion. The local sanitary authorities are displaying every activity, and doing all that lies within their power for the arrest of the disease. It is unfortunate for Marylebone that at this juncture it should be deprived, we regret to say by sickness, of the services of Dr. WHITMORE, its medical officer of health, but his place for the moment has been taken by Dr. MEYMOTT TIDY.

The outbreak in Hampstead and Marylebone is clearly of exceptional interest, both scientifically and in its public health aspects, and we venture to express a hope that our professional brethren there will render every assistance to Mr. POWER in his difficult task. It is to the honour of the milk-dealers in the infected localities that, following the excellent example of the Dairy Reform Milk Company in 1873, they are giving the most willing aid to the sanitary authorities in the endeavour to trace out the source of the outbreak so far as the milk-supply may be suspected of being concerned in it. But, we may add, this connexion, if it ever had place, was but very transitory, and there does not appear to be any sufficient reason, according to our present information, for believing that milk plays a part in the dissemination of the disease now going on.

THE current number of VIRCHOW'S *Archiv* contains an account of two series of researches on the action of peroxide of hydrogen on the animal body—investigations which were carried on independently of one another, and have led to very similar conclusions. The more extensive and important of the two is by Dr. PAUL GUTTMANN, the other by Dr. ERNST SCHWERIN. The decomposition and evolution of gaseous oxygen which this substance undergoes in contact with organic matter is well known, but it has been said by ASSMUTH and SCHMIDT that this decomposition does not take place in the circulating blood. Both the observers have demonstrated that this is an error, and that it is by this decomposition that the substance exerts the remarkable poisonous influence which it is known to possess.

If a small quantity—three or four cubic centimetres—of a weak solution of peroxide of hydrogen is injected under the skin of a rabbit, death occurs in a few minutes with all the signs of asphyxia. The same result, at a little longer interval, follows the injection of only three-quarters of a cubic centimetre; but if the quantity is smaller than this, the animal, after suffering from intense dyspnœa for some minutes, gradually recovers. Half a cubic centimetre produces the same effect upon a frog. At the place of injection SCHWERIN noted that extensive subcutaneous emphysema occurred. Dogs, however, appear to be much less easily

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affected, for three times the quantity which killed a rabbit had little effect upon a dog, causing only transient dyspnœa; and ASSMUTH found the effect on dogs to be still slighter.

Taken into the stomach, peroxide of hydrogen is capable of producing the same effect, although in slighter degree and with less certainty. The quantity which, injected under the skin of a frog, was fatal, produced little effect when taken into the stomach; but a larger quantity caused death, with the same symptoms as the subcutaneous injection produced. SCHWERIN, however, found that rabbits seemed to possess an immunity from its prejudicial influence when it was taken into the stomach. The organ became distended with gas, could be felt in the abdomen as an elastic tumour, but no asphyxial symptoms were caused. On the other hand, in a dog convulsive vomiting was produced, followed by recovery. No doubt the immunity of rabbits is due to the decomposition of the whole of the ingested peroxide by the large quantity of vegetable matter which is always found in the rabbit's stomach.

The mechanism by which peroxide of hydrogen produces death has been carefully studied by GUTTMANN. The fact that in contact with organic matter the excess of oxygen is liberated in abundant bubbles has suggested that its lethal influence is due to such liberation of gas in the blood, and this is very clearly proved. After death, in animals killed by it, the inferior vena cava is found filled with "foaming" blood. The bubbles may be seen also in the right auricle and right ventricle, but none in the left side of the heart. The heart of a frog continues to beat for some time after death, a sufficient proof that it is not by any action on the heart that the symptoms of asphyxia are produced. In the frog the mechanism of the effect can be very well studied. If the heart be laid bare a minute after the injection of the peroxide under the skin of the leg, the first bubbles are seen in the heart, and on the next systole they appear also in the aorta. They do not, apparently, pass beyond the aorta, for in it they rapidly coalesce into bubbles of such large size that they cannot enter a vessel of smaller calibre. The aorta becomes greatly distended, and the action of the heart causes the bubbles to oscillate to and fro, instead of moving on. At first the heart pulsates regularly, but gradually the auricle is distended so as to paralyse it, and the contracting ventricle receives but little blood. If a small dose is injected, from which the frog can recover, the heart, twenty-four hours after the injection, is found to be beating naturally, and no trace of the bubbles can be seen. These facts explain the rapid death which occurs in the mammalia. The obstruction of the twigs of the pulmonary artery by bubbles of gas arrests the circulation in the lungs. The arrest is not due to the accumulation of gas in the right heart, because the facts just mentioned show that the accumulation would not take place in the heart until after an obstruction had become developed in the pulmonary artery. How far the air is driven along the pulmonary artery is uncertain, but GUTTMANN has proved that it does not reach the smaller divisions. By the method of HOLMGREN he observed the circulation in a small portion of the lung during the process of asphyxia. A few minutes after the injection, the circulation in all parts of the lung is suddenly arrested, but nowhere can any bubbles of gas be seen in the smaller arteries.

Another series of experiments demonstrated that substances easily oxidisable will to some extent prevent the action of peroxide of hydrogen on the organism, by preventing the liberation of gaseous oxygen. Thus the action of a minimum fatal dose injected into one leg could be prevented by the injection of such an oxidisable substance into the other leg. With larger quantities of peroxide the effect was not obtained, no doubt on account of the violence of its action and the rapidity with which death occurs.

The circumstance that small doses of peroxide of hydrogen lose all their specific property in the alimentary canal, and that large doses produce these toxic effects, preclude any expectation of good from its internal administration. But the substance has a very powerful antiseptic action, and this affords some prospect of utility as an external application, for which it has been often recommended, although seldom employed. GUTTMANN and FRAENKEL have found that it is capable of entirely preventing the decomposition of urine. If one part of a solution of peroxide of hydrogen is mixed with ten parts of urine, no putrescence occurs, and the urine will remain acid and free from bacteria for months. A filtered infusion of meat remained clear, after a similar addition, throughout the warmest summer weather, while a similar fluid, without such addition, was turbid from bacteria in a few days. The fermentation of grape-sugar may also be effectually prevented. STÖHR found that unhealthy sores were greatly benefited by the application of peroxide of hydrogen, and that soft chancres healed in one half of the usual time. The secretion of the soft chancre was so altered as to be incapable of communicating the sore when inoculated. The action in diphtheria was equally marked, and the contagious character of the secretion appeared to be completely neutralised. This is one of its applications of the greatest promise. For these and other uses Dr. GUTTMANN is now trying the substance, and we are promised a further communication on the subject. It is interesting to find that the preparation found to possess the greatest stability is that prepared by an English firm, Messrs. HOPKIN and WILLIAMS.

HUMAN NATURE has been humiliated, not less than the public conscience of Europe has been outraged, by the recent two attempts to assassinate the Emperor of GERMANY. It would be a relief to the political and even the philosophic aspects of the situation, if it were possible to regard the second of these dastardly deeds as an instance of the phenomenon we are accustomed to indicate, rather than explain, by the designation "epidemic crime." Unhappily evidence points conclusively to the inference that the cowardly offences every right-minded person must deplore, and which awaken as much indignation as regret, are the fruits of deeply-sown treason, which, in the interests of liberty throughout the Continent, not less than in a particular State, it may be necessary to uproot. Meanwhile, supposing it had been reasonably possible to contend that this repetition of a murderous attack on the life of a loved and revered Sovereign was of the nature of an "epidemic," what hypothesis would the phrase indicate, and what theory would it imply? It is easy to understand that a physical disease may be propagated by the transfer of certain products of morbid action, crudely called "germs,"

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from one individual to another, the presence of the "poison" in contact with the previously healthy organism, in any one of several known ways, setting up a morbid state corresponding to that which produced the "germ." It is not, however, equally easy to comprehend the propagation of mental disease by the dissemination of morbid "ideas," which is what the hypothesis of an epidemic of crime would seem to betoken. Assuming for the moment that *crime*, or the condition of mind that leads to the outrage of the laws of society and public order, could spread, as is sometimes hastily supposed, it would of course follow that the outcome was essentially a disease! The theory of responsibility is excluded by the presumption that one mind may be morbidly impressed by another. The subject of infection could not possibly be accountable for a malady contracted, and must be absolved from the penal consequences of its effects. The presumption extends even further, and the fact that the state of the first offender could be propagated would strongly support the inference that it was itself morbid, and, therefore, pitiable rather than punishable in the eyes of the law. Questions of great gravity are involved in this issue, and it is one the profession should not hesitate to discuss.

In communities of persons similarly conditioned, mentally and physically, either or both, there is an obvious tendency to the multiplication of similar, if not identical, acts and forms of conduct; but this may generally be traced to one of two causes—the force of circumstances operating under like conditions on similar minds, and producing a common sentiment, or that propensity for imitation which man shares with the animals below him, and which acquires special development with the associative faculty in gregarious life. Individuals thrown together in considerable numbers, under common influences, lose their individuality, and become impressed with a character which is, so to say, a mean or resultant of the whole. The consonance of circumstances and conditions gives rise to a sympathy of feeling and thought. It is, therefore, easy to understand how "impulses" are propagated through a series of minds so placed *en rapport*. The method is the same whether the impulse that spreads be good or evil, and it is equally effective as a means of extension in health and disease. This theory will explain much, perhaps the largest part, of the sympathy or community of sentiment and motive which characterises the conduct of large masses of the people; the accord which prevails among classes of a population; and that almost instantaneous propagation of impulses which often makes a crowd seem to act by preconcerted signal when it is only stirred by a common extemporary idea. It will not, however, throw any light on "epidemic crime." Setting aside cases in which members of the same community repeat a particular offence, without conspiracy (and these are really very few), it will be found that, in the great majority of instances we are asked to explain, the several offenders have little or nothing in common, at least not more than may have suggested to vicious minds the imitation of conduct approved and admired. It is not a little remarkable that the spread of a so-called "epidemic of crime" seldom follows the rules which would seem to be prescribed by the analogy of zymotic disease. The deed done in one district is imitated in a remote region by a person who has no similar motive, or in whose case the purpose is so obvious that it cannot be doubted he intentionally adopted the suggestion. If "morbid ideas" played the same part in the production of mental disease which the products of specific maladies commonly called "germs" perform in the spread of bodily disease, there should be something of order in the extension of the mental state; in short, it should be possible to trace it as the epidemiologist can track the cause of plagues and fevers, and no such sequence can be detected. If the discovery were made, it would, as we have said, go far to show that crime was in fact disease!

It is of course necessary to abate something of the demands for proof in respect to the alleged epidemic character of crime, because any suggestion or morbid idea of evil embodied in a tragedy is instantly disseminated over an immense area by the press; but with so large a seed-sowing we should have a prodigious crop. Susceptible minds with a criminal bias are unhappily sufficiently plentiful to supply abundant soil for the fertilisation of mental germs. In short, the conditions are so propitious for the spread of criminal mind-disease in this fashion, that if the hypothesis were tenable, there would be no need to search for evidence in its behalf. Beyond the ascertained facts—that weak minds are usually impressible and especially by suggestions agreeable or appealing to their consciousness; that half morbid and half vicious minds are perpetually on the *qui vive* for mischievous hints or inspirations; and that the faculty of imitation is strongly, or even overpoweringly, developed in a large proportion of persons unswayed by the principles of order, who are, in short, ever ready to follow in the wake of a lawless leader, but never willing to submit to discipline or obey,—there are no indications of a nature to dignify crime with the character of disease, and it is a blunder in social policy so to represent it. The tendency of modern philosophy is too much in the direction of disbelief in direct personal responsibility. The consequences of such a view of life and duties cannot fail to be disastrous, and on this account, as well as the insufficiency of the proofs adduced, it is desirable the facts should be stated. Statistics do not support the hypothesis, and science, reasoning from analogy, cannot recognise the theory that crime is "epidemic." Wicked and weak minds imitate and emulate the evil deeds they admire; and the harpies who lurk ready to prey on society are greedy of new "ideas"; but these scattered suggestions are not "germs," and they do not act as the propagators of disease in producing crime. When mental disease in its true sense spreads by infection, which is possible, the "morbid ideas" disseminated operate as mind-poison only on susceptible mental organisms, and the result is a state of disease which, even if it produces criminal acts, is so differentiated from "crime," properly so called, that mistake is scarcely possible. The two phenomena, the morbid and the vicious, have nothing in common, and, in the interests of society, they should be kept clearly and widely apart.

ON Saturday last the Royal College of Physicians of London celebrated the HARVEY tercentenary in a truly British fashion by a sumptuous banquet in the library of the College. The subsequent speech-making was of a varied character, ranging from a consideration of rival merits of medical corporations and universities to the claims of

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HARVEY as the discoverer of the circulation of the blood, and the enunciator of the true theory of development. Mr. HUXLEY was entrusted with the duty of championing HARVEY'S claims, and considering that he had recently delivered a lecture on HARVEY at the Royal Institution, written an article on the same subject in the *Fortnightly Review*, and a critical and biographical sketch in *Nature*, it must be confessed that he did his work well enough. But without wishing to detract from the merits of Mr. HUXLEY'S defence of HARVEY, we cannot but think that the task of replying to the toast "The Memory of HARVEY," might with advantage have been put into other and fresher hands. Some weeks ago we endeavoured to show in what sense and how far HARVEY may be really considered as the discoverer of the circulation. While crediting HARVEY with the discovery in the highest and best sense, we could not and cannot go the length of Mr. HUXLEY, who with some other of HARVEY'S panegyrists, both in this country and abroad, seem to isolate HARVEY too much, and try to add to his renown by cutting him off entirely from his predecessors and from his distinguished contemporaries. Mr. HUXLEY maintains that the doctrine of the circulation of the blood, as put forward by HARVEY, "was not only absolutely original as regarded himself, but absolutely novel in respect to all those who had gone before him." This is certainly straining historical evidence to its utmost stretch. M. MILNE-EDWARDS, by no means a lukewarm admirer of HARVEY'S genius, gives a soberer estimate of his claims. After alleging that the glory of the discovery of the circulation of the blood belongs to HARVEY, he proceeds to show that this, like all the other grand discoveries of science, was prepared little by little by the efforts of a great number of observers, and that the man of genius who first fixed his name to it had few facts to add to those established by his predecessors in order to seize their connexion, and to deduce their consequences. HARVEY had in an eminent degree many of the best qualities for scientific experimentation, which most of his predecessors lacked. His lucid perception, his prompt and sure judgment, his exquisite good sense, which always guided him in the appreciation of facts, in the deductions to be drawn from them, and in the selections of the tests which he employed to support his doctrines, enabled him, says MILNE-EDWARDS, to arrive at results which his predecessors only vaguely suspected. Far as did some of HARVEY'S contemporaries stray, they were not altogether without some inkling of the truth. Dr. ROBERT WILLIS, in his excellent "Life of Harvey," prefixed to the Sydenham Society's edition of HARVEY'S works, in speaking of HARVEY'S first exposition of his views respecting the circulation, in his lectures before the College of Physicians in 1616, gracefully says, "Long years had, indeed, been labouring at the birth which then first saw the light; civilised Europe, ancient and modern, had been slowly contributing and accumulating materials for its production; HARVEY at length appeared, and the idea took fashion in his mind, and emerged complete, like Pallas perfect from the brain of Jove." HARVEY was very largely dependent upon the results of the labours of antecedent and contemporary observers, and we shall exalt him most when we make this acknowledgment. His glory was that he succeeded where they had failed.

Annotations.

"Ne quid nimis."

THE COLLEGE ELECTION.

TEN candidates for three seats in the Council of the Royal College of Surgeons! This is, we believe, an unprecedented event. On no previous occasion has there been more than nine candidates for three vacancies; but this year ten gentlemen have actually sent in their applications, the three retiring members and seven others. The retiring candidates, Mr. Erasmus Wilson, Mr. Henry Lee, and Mr. Barnard Holt desire re-election, and the names of the other candidates, in their order of seniority, are: — Mr. John Gay, Mr. Joseph Lister, Mr. Thomas Bryant, Sir Henry Thompson, Mr. John Wood, Mr. Henry Power, and Mr. Edward Lund. After the dust which a few individuals endeavoured to raise about the question of seniority has settled, it may be well to state briefly what the facts are. The bye-laws of the College relating to the election and admission of members of Council (sec. iv. 6) state: "If at any election two or more candidates for one or more vacancies shall obtain an equal number of votes, the right of such candidate to election shall be determined by their seniority as fellows of the College." In the year 1868, Dr. George M. Humphry and Mr. Luther Holden were elected members of the Council. The former was a member of the College of 1841, and a fellow by election of August 26th, 1844, while the latter was a member of 1838, and a fellow by examination of Dec. 24th, 1844. Mr. Holden, therefore, was senior to Dr. Humphry as a member by three years, but Dr. Humphry was Mr. Holden's senior as a fellow by four months. The question of the order of precedence in the Council was specially raised and definitely decided by the seniority of fellowship, and those gentlemen's names are placed in the College Calendar in accordance with this resolution.

THE FEES FOR A MEDICAL EDUCATION.

SOME years ago an attempt was made to raise the fees which a student was required to pay for his medical education, but the medical schools would not co-operate, and so the attempt failed. During the past two months the project has been resuscitated, and this time it bids fair to be successful. Two or three meetings of delegates from the metropolitan and provincial medical schools have been held, and we hear that, as the outcome of their deliberations, five of the most important metropolitan schools and the most influential provincial school—viz., St. Bartholomew's, Guy's, St. Thomas's, King's College, University College, and Owens College—have practically decided to raise their fees. The London Hospital, St. George's, and St. Mary's will probably follow the example of the others; and Charing-cross, Westminster, and the provincial schools generally, may join in the movement; but the teachers of the Middlesex School positively decline, unless every Scotch and Irish school can be persuaded to assist in the scheme. The contemplated increase in the fees is about 25 per cent., and henceforward the fees will be exactly the same in the consenting schools. With regard to the movement, we would ask three questions only. In the first place, is it justifiable? There can be no doubt that a proper course of medical education costs the authorities of a medical school considerably more than it did ten or even five years ago, for the apparatus necessary for the proper teaching of every subject practically has to be provided by every school worthy of the name, and of course this must be considered in estimating the fees that a student should be called upon to pay. We doubt, indeed, whether the increase of 25 per cent. will give to the present teacher so much as the old-fashioned pro-

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fessor enjoyed, who lectured for one hour exactly, three times a week, and then went his way. It is noteworthy that the schools which send most pupils to the University of London, where practical tests form the characteristic excellences of the examinations, are unanimous in agreeing to raise the fees. Have the recent regulations of that body decided them on taking this course? Secondly, is it opportune? This is much more difficult to answer, and forms the chief objection to the project. Trade is dull, and even now many are making sacrifices in order to pay the fees which are necessary for the education of the medical student of the family. We feel that at some time it will be necessary to raise the fees, but it must be left to the teachers themselves whether this ought to be done at once or deferred till a future opportunity. Waiting for a combination of all the medical schools in Great Britain seems a vague policy, when we study the history of the attempt to carry out a combined scheme for a minimum examination by a much smaller number of bodies. How will it affect the various medical schools? We fear that unless all, or nearly all, the English schools agree in this matter, it will injuriously affect the cohesion of the medical profession. The students at the schools where most fees are charged will look with some diffidence on their brethren who are being educated at the cheaper schools, and such a feeling is much to be deplored. We trust, therefore, that whatever is decided on will be adopted as unanimously as possible, and so minimise antagonism between the various schools, and prove to the laity that in such an important matter there is no radical difference of opinion among the heads of the profession.

ENGLISH INFANT MORTALITY IN 1877.

NOW that few births and still fewer deaths escape registration, the rate of infant mortality, measured by the proportion of deaths under one year to births registered, affords a comparatively trustworthy test of sanitary condition. Infant mortality thus measured was equal to 136 per 1000 during 1877, against 158 and 146 in the two preceding years. The mildness of the winter, and the moderate temperature during the summer, were so favourable to the public health that the rate of mortality at all ages in 1877 was lower than in any year since civil registration commenced, in 1837; it was equal to 20·4 per 1000, showing a decrease of 6 per cent. from the average annual rate in the five preceding years. The English rate of infant mortality in 1877 was also the lowest on record, and showed a decline of 10 per cent. compared with the average rate in the five preceding years; the moderate summer temperature and the consequent low death-rate from diarrhœa was the main cause of the marked decline of infant mortality. The variations in the rate of infant mortality in different parts of England and Wales were, however, as strongly marked as in previous years. Whereas the proportion of deaths under one year averaged 136 per 1000 births registered in England and Wales during 1877, it ranged in the above registration divisions from 109 in the mainly agricultural population of the South-eastern to 146 in London and 153 in the North-western, which includes Cheshire and Lancashire, where the population is principally engaged in manufacture or mining. The variations in the county rates of infant mortality were still wider. The proportion did not exceed 94 in Dorsetshire, 95 in Herefordshire, 98 in the extra-metropolitan portion of Surrey, and 99 per 1000 births in Wiltshire; whereas it was equal to 152 in Monmouthshire, 153 in Nottingham, 157 in Lancashire, and 161 in Leicestershire. We are, perhaps, too apt to look upon waste of life in urban populations as inevitable, and therefore it becomes necessary to compare urban with urban, and rural with rural rates. The population of Lancashire is nearly as large as that of London, and includes a not inconsiderable proportion living in rural districts, whereas the whole of the London population is urban, and yet infant mortality was equal to 157 per 1000 births in Lancashire, and did not exceed 146 in London. This signifies that more than 1400 infants aged less than one year died during last year in Lancashire, who would have survived had they been born in London, while compared with rural rates the high rate of infant mortality in Lancashire signifies the loss of more than 7000 infant lives. Fully as striking was the difference between the rate of infant mortality during 1877 in the two agricultural counties of Wiltshire and Norfolk; in Wiltshire it did not exceed 99, while in Norfolk it was equal to 141 per 1000 births registered. This high rate of infant mortality in Norfolk, which is a mainly agricultural county, calls for investigation. In twenty of the largest English towns the rate of infant mortality last year averaged 154 per 1000, and ranged in the several towns from 133 and 143 in Portsmouth and Sunderland, to 188 and 189 in Liverpool and Leicester. It is time that these marked variations in the proportion of infant mortality should receive more public attention than they have hitherto commanded, and it is in this branch of sanitation that the women of England, anxious for useful work, could render valuable service.

THE MICROPHONE.

IN another portion of this week's issue will be found an account of a novel experiment in surgical diagnostics, although the announcement cannot be said to be entirely new. On Saturday last Sir Henry Thompson, in the presence of three or four friends, tried the microphone as a means of demonstrating stone in the bladder, and, with an alacrity characteristic of these precipitous days, the result was publicly announced in *The Times* newspaper on the following Monday morning. Although the account which Sir Henry Thompson has given us is necessarily more complete than that obtained by *The Times*, some readers may be disposed to cavil at the arrangement by which the general public are made acquainted with facts of a purely technical character earlier than members of the medical profession, and may even go so far as to insinuate that the lay public is scarcely the proper audience to be addressed in the first instance. The latter objection does not concern us; besides, it is not so much a question of opinion as of taste, while as to the former, we have only to plead that slowness is one of the disadvantages of hebdomadal literature. After the public announcement on Monday, however, Sir H. Thompson lost no time in giving his professional brethren and his former colleagues and pupils at University College an opportunity of witnessing, next day, the demonstration of the microphone as a stone detector. It is not surprising that this marvellous instrument should have suggested itself for such a purpose, and unless happy thoughts in this connexion have already become stale, we may expect to meet with further announcements in the daily newspapers of fresh uses of the microphone in the diagnosis and treatment of disease. What a field for the aurists, the bone-setters, and the liver doctors who may by this means "talk" to the gall-stones of their patients, or listen to the rattling of of the hooklets of echinococci! Some conception of the wonderful power of the microphone may be gathered from the following extract from the paper of Professor Hughes, the inventor:—"In its present shape, it is capable of detecting faint sounds made in its presence. If a pin, for instance, be laid upon or taken off a table, a distinct sound is emitted, or if a fly be confined under a table-glass we can hear the fly walking with a peculiar tramp of its own. The beating of a pulse, the tick of a watch, the tramp of a fly, can thus be heard at least a hundred miles distant from the source of the sound." A possible source of disappointment in the experiment with the fly has, however, been pointed out

by *Nature*. At a demonstration given by Professor Hughes, "the only small fly available in the room, after having been carefully hunted and enclosed in a small tumbler, obstinately declined to walk on the wood." This drawback does not belong to the experiments of the microphone in demonstrating the presence of stone in the bladder. Before the instrument can be used at all the stone must have been detected by other and more ordinary means, so that the necessity of the microphone ceases as soon as the conditions under which it can be worked are established. In short, the stone must be found before its presence can be demonstrated.

On the day of going to press, and after that portion of our journal containing Sir Henry Thompson's paper is "made up," we find a full and detailed account of the demonstration at University College Hospital copied into *The Times* from a report in *Nature*. We must, therefore, apologise to our readers for placing Sir Henry Thompson's communication among the "Original Articles."

THE DEAD-POINT IN MIND TENSION.

IT is a common subject of marvel that criminals in presence of immediate execution are usually self-possessed, and often exhibit singular composure. The doomed creature sleeps through the night before his violent death, and rises composed to pass through the ordeal. The exceptions to this rule are few, and there is no reason to suppose that the individuals who display greater emotion, or who are prostrated by the agonising prospect of death, feel their position more acutely than those who preserve control of their demeanour. It is a prevalent but groundless error to suppose that the state of mind in which most capital offenders meet their doom is one of scare or paralysing amazement. They retain every faculty, taste, consideration, and even fancy. They frequently give tokens of especial thoughtfulness, and are punctilious in the observance of rules and the adoption of measures to minimise their own pain, and the trouble and sympathetic suffering of those by whom they are surrounded, or who will be left burdened with their memories. Mentally and physically the criminal, during the last few hours of his life, in the immediate presence of a cruel death, is self-possessed and tranquil. His pulse is even less disturbed than those of the officials who are compelled to take part in his execution. Why is this? The answer will be obvious on reflection. The mind has reached what may be designated a "dead-point" in its tension. The excitement is over, the agony of anticipation, the trembling doubt between hope and fear of escape, has exhausted the irritability of the mind, and there is, as it were, a pause, an interval of passive endurance between the end of the struggle for life, and the bitterness of remorse and agony of disappointment which may begin at death. In this interval the mind is released from the tension of its effort for self-preservation, and almost rebounds with the sense of relief that comes with certainty, even though the assurance be that of impending death. In the pause there is time and opportunity for the recognition of surrounding circumstances which have been, as it were, overlooked in the yearning for life. The clearness of mental vision, the cognisance of detail displayed at such a moment, are remarkable, not only on account of the strange circumstances under which they occur, but in degree. Men and women who have for some time previously exhibited no trace of delicacy or refinement exhibit characteristic traits of thoughtfulness. They are, so to say, lifted out of themselves and placed in new conditions calculated to awaken feelings of courtesy, which seldom fail to respond. The mental state of a criminal during the hours preceding execution presents features of intense interest to the psychologist, and, rightly comprehended, it is to be feared they would throw new light on the supposed preparation these unfortunate persons evince for a fate which, being inevitable, they at the final moment are able to meet with a composure in which hypocrisy or self-deception find the amplest scope.

A ROYAL COMMISSION ON SMALL-POX AND VACCINATION.

WE must repeat our appeal for an inquiry by Royal Commission into the conditions of occurrence of small-pox epidemics in a country where vaccination is extensively practised, and into the manner in which that preventive measure is employed. It is impossible to deny, and useless to disguise, the fact that there is need of investigation. Objections may be urged against such an inquiry, as calculated to disturb the tolerably wide-spread and enduring faith in vaccination, and as offering a weapon of mischievous capabilities to the opponents of vaccination. We are not harassed, and therefore cannot be restrained from speaking plainly on this question, by any misgiving as to the genuine value of vaccination. Meanwhile, it is impossible to feel satisfied with the manner in which it is generally performed. There is grave reason to fear that the essential needs of the process are not clearly understood, and grounds of disquietude exist as to the character of the lymph employed in numerous if not a multitude of cases, as well as with respect to the method of introducing the vaccine matter, and divers points of detail upon which the result depends. It may occasion some trouble, which we should, of course, be glad to spare public officers, if an inquiry is instituted, and we must count on letting in a flood of folly, the outpouring of ignorant minds, which will assail the common-sense of the Legislature and the country; but, looking the worst of "threatened" consequences in the face, we adhere to the conviction that a Royal Commission should issue, and we venture to urge that the matter may be brought before Parliament without delay. The Privy Council is undoubtedly the body to take action on the question. It is not a business in which the Local Government Board can properly interfere. Although it happens that public vaccinators are practically under the control of that authority, we cannot hope or desire that the Board will move in the matter, because, as a matter of fact, the practice of public vaccination, and the manner in which the returns based on the entries made by public officials are left to be estimated and classified in the Registrar-General's Department, will need to be subjected to a scrutiny not less close than that devoted to any other aspect of the question. Great and lasting mischief to the cause of public health has resulted from the want of a medical adviser to the Privy Council. If the office had been retained, we might now appeal to the gentleman holding it to conduct this inquiry. Failing the possibility of this recourse, nothing short of a Royal Commission will suffice to allay public anxiety, and we are strongly of opinion that the appointment should not be delayed.

PROVIDENCE AND CHARITY IN MEDICAL MATTERS.

THE great question of the relation of providence and charity with reference to medical attendance has had an interesting discussion in connexion with the West Bromwich District Hospital. The result has been remarkable, and will probably be regarded as discouraging to those who advocate the introduction of provident and self-denying principles into the conditions of medical relief and help at hospitals and dispensaries. For some time past the *Out-patient* department of this particular hospital had been felt to be in an unsatisfactory condition, and the Weekly Board, after several anxious meetings, came to the conclusion that the abuse of it, "admitted by all," should be met by the establishment of a provident dispensary in connexion with the hospital. Every legally qualified and registered medical

practitioner resident and practising was to be an officer of the institution, if willing. The benefits were to be open to all persons whose income, if married, did not exceed £78, and £60 if single. The terms of admission to benefit were to be much the same as in ordinary provident dispensaries. The proposal of the Weekly Board was rejected by eleven to ten. The chief arguments of the opponents were that the out-patient department would be ultimately swept away, that the working classes would be alienated from the hospital, and that the provident dispensary was inconsistent with the charitable character of the hospital. It was said that as many parents who send their children to the School Board schools cannot afford to pay the fees, so they cannot afford to pay the sums required by a provident arrangement. But many parents can afford to pay both, and it is to be regretted that a well-considered experiment of this sort has been negatived by a majority of one. The movers were at fault in not more forcibly illustrating the abuse of the existing system. It is said "to be admitted by all." But it was proved by none, and a majority refused to alter it. If this battle is to be won, there must be more detail and illustration, and less vague and general denunciation. It is clear that providence is better than dependence on charity. It is also clear that in the matter of medicine the British public will give medical help to those who are poor, but not paupers, or, rather, they will expect medical men to give it. And medical men will give it, only they demand more protection against abuse of their kindness.

IS CONSUMPTION CONTAGIOUS?

FROM the time of Aristotle to the present, various medical writers have urged that phthisis may be propagated from one individual to another through the medium of a material cause. Although we feel bound to say that the supporters of this doctrine have been in the minority, yet they include amongst them many of the celebrities of our profession, and there can be no doubt whatever that many of the most illustrious pathologists and clinical observers of our day coincide in this view. In Dr. R. Morton's "Treatise of Consumptions," published in 1694, and Dr. T. Young's "Practical and Historical Treatise on Consumptive Diseases," published in 1815, these opinions are set forth with great force and vigour. It is curious to notice that the contagiousness of phthisis is, and has been, very generally held in Southern Europe, that it has been doubted, as a rule, and especially during the past century, in North Germany and Great Britain, whilst French authorities have been much divided on the question. Since the investigations of Villemin, Wilson Fox, Sanderson, and others on the inoculability of tubercle, and the spread of the disease from local infective centres, physicians are much less inclined than they formerly were to underrate the importance of contagion as a factor in the causation of this disease. Dr. Walshe, in 1860, considered the influence of contagion anything but proven, but in 1871 he had considerably modified his views, for he said, "My belief in the reality of such transmissibility has of late years strengthened. I have now met with so many examples of the kind that *coincidence* becomes itself an explanation difficult of acceptance." Cases due to a supposed contagion are generally of an inflammatory character, and very rapidly run on to destruction of the lungs and a fatal termination. We are frequently asked why, if consumption be contagious, wives and husbands who have been in close attendance on their diseased consorts do not inevitably become affected? The answer to this query is, that even when experiments have been carried out on animals, the tuberculising process occasionally fails to take place, and the direct transmission of infecting particles from the lungs of one individual to another is obviously much more liable to failure. As a matter of practice, we think that it cannot be too strongly enforced that it is a very dangerous proceeding to regularly share the bed of a phthisical patient, and to be habitually in close contact with, and attendance on, such a person.

MR. BARWELL'S CASE OF AORTIC AND INNOMINATE ANEURISM.

BY one of those errors which, whether committed by patient or doctor, are only too instructive, we are now in possession of the full history of this case. A paper was read at the last meeting of the Medico-Chirurgical Society completing that presented earlier in the session. The man—the subject of the aneurism—refused to remain in the hospital, caught cold on leaving, and died from bronchitis and hypostatic pneumonia. Dissection of the thoracic viscera showed the aneurism to be almost completely cured, the relatively small central cavity of the tumour being everywhere surrounded by thick laminated fibrin, while the carotid and subclavian arteries were completely occluded from their origin to the ligatures, so that blood no longer flowed through the sac. The success of the treatment is thus proved to demonstration, nor have we far to look for the cause of it. It lies in the complete stoppage of the blood-stream through the aneurism, owing to the entire occlusion of the carotid and subclavian trunks. It might be taken as certain that the carotid would be obliterated, for there were no branches arising from it below the ligature. But the case of the subclavian artery is different; a stream of blood might still have continued to flow through its first and second parts into the large branches arising from them, and this current would have seriously interfered with, if it had not entirely prevented, the coagulation. The complete occlusion of the vessel was, no doubt, due to some happy *accidental* relation of its mouth to the sac, and it is not a result that we can expect to follow the operation in every case. Nor can we tell beforehand the probability of its occurrence, for in this case there was "no perceptible difference" between the radial pulses before the operation, so that we can say that it was not such a relation of the artery to the sac as to hinder the flow of blood through it that subsequently led to its complete occlusion when the ligature was applied. Had the radial pulse been markedly affected, we might have hoped that this sign would enable us to foretell the obliteration with some certainty. It is worth while to notice the manner in which the anastomotic circulation must have been carried on in this case. The brain would easily be supplied through the circle of Willis, and the branches of the external carotid would get their blood through the median anastomoses with those of the opposite side, which, after ligature of the common carotid artery only, are relatively quite unimportant. The great difficulty lay in the supply to the arm, the only channels open being the anastomoses on the side of the chest between the offsets of the aortic intercostals and the superior thoracic, acromio-thoracic, long thoracic, external mammary, and subscapular branches of the axillary artery. Yet the only affection of the arm was "a dull sensation and tingling with slight paresis," and even this was "transient."

THE LONDON SMALL-POX EPIDEMIC.

THE fatality of small-pox in London, and its prevalence judged by the number of cases under hospital treatment, continue to decline. The deaths from small-pox in registration London, which were 80 in the third week in April, have since steadily declined, and fell to 40 in the week ending 1st instant. In the outer ring of suburban districts the recorded fatal cases were 4 during the same week. The 40 in London included 24 in the Metropolitan Asylum Hospitals, 3 in the Highgate Small-pox Hospital, and 13 in private dwelling-houses. Seven of the deceased small-pox patients had resided in Pancras, 4 in Hackney, and 4 in Greenwich. Of the 13 fatal cases recorded in private

dwelling-houses, 2 occurred in Islington, and 2 in Newington. The 43 cases in London included 20 certified as unvaccinated and 11 as vaccinated, while in the remaining 9 cases (of which 8 occurred in private practice) the certifying medical practitioners omitted to give any information as to vaccination. Of the 4 deaths from small-pox in the outer ring of suburban districts, 3 occurred in West Ham, and 1 in Barnet registration sub-districts.

The number of small-pox patients in the five Metropolitan Asylum Hospitals, which was 854 on 20th April last, has since steadily declined to 638 on the 1st instant; and the number of new cases admitted, which had been 170 and 126 in the two preceding weeks, further fell to 108 in the week ending last Saturday, which was a smaller number of admissions than in any previous week since the beginning of this year. In the Highgate Small-pox Hospital there were 48 patients on Saturday last, against 39 at the end of the preceding week, and 20 new cases were admitted during the week.

WANDERING NEEDLES.

THE vagaries of needles which have been introduced in the body, and have escaped immediate removal, have in all ages attracted the attention of collectors of the marvellous in medicine. Hildanus related an instance of a woman who swallowed several pins, and passed them six years afterwards; but a more remarkable instance of prolonged detention was lately recorded by Dr. Stephenson, of Detroit—that of a lady, aged seventy-five, who last year passed, by the urethra, after some months' symptoms of vesical irritation, a pin which she had swallowed while picking her teeth with it in the year 1835—forty-two years previously. Occasional pain in the throat was the only immediate symptom, but in 1845 she was seized with severe gastric pain, which passed away, and she had no further symptoms until hæmaturia in 1876. This curious tolerance of such foreign bodies exhibited by the tissues is often observed in lunatic asylums. M. Silvy recorded some years ago the case of a woman who had a *penchant* for pins and needles so strong that she made them, in effect, part of her daily diet, and, after her death, fourteen or fifteen hundred were removed from various parts of the body. Another case, almost as striking, has been recorded by Dr. Gillette—that of a girl in whom, from time to time, needles were found beneath the skin, which they perforated, and were removed by the fingers or forceps. Concerning the way in which they had got into her system no information could be extracted from her. She was carefully watched, and in the course of eighteen months no less than 320 needles were extracted, all being of the same size. Most were black and oxidised, but some had retained their polish. The majority were unbroken. They passed out of various parts of the body above the diaphragm at regular intervals, but in a sort of series, and always in the same direction. Most escaped in the region of the left nipple, and a few escaped in the arm, axilla, thigh, temple, and cheek. Sometimes several passed out of the same opening. The largest number which escaped in a single day was sixty-one. A curious phenomenon preceded the escape of each needle. For some hours the pain was severe, and there was considerable fever. She then felt a sharp pain, like lightning, in the tissues, and on looking at the place at which this pain had been felt, the head of the needle was generally found projecting. The needles invariably came out head foremost. No bleeding was occasioned, and not the least trace of inflammation followed. The doctor in attendance extracted 318. They were sometimes held firmly, and seemed to be contained in a sort of indurated canal. It was conjectured that they had been swallowed with suicidal intentions; but, on the other hand, the way in which the needles escaped in series, and their direction with the head outwards, suggested that they had been introduced through the skin. That little weight is to be attached to the place at which the needles escape as proof of their mode of introduction is evident from a case recorded by Villars of a girl who swallowed a large number of pins and needles, and two years afterwards, during a period of nine months, 200 passed out of the hand, arm, axilla, side of thorax, abdomen, and thigh, all on the left side. The pins, curiously, escaped more readily and with less pain than the needles. Many years ago a case was recorded by Dr. Otto, of Copenhagen, and mentioned at the time in THE LANCET, in which 395 needles passed through the skin of an hysterical girl, who had probably swallowed them during an hysterical paroxysm; but these all emerged in the regions below the level of the diaphragm, and were collected in groups, which gave rise to inflammatory swellings of some size. One of these contained 100 needles. Quite recently Dr. Bigger described before the Society of Surgery of Dublin a case in which more than 300 needles were removed from the body of a woman who had died in consequence of their presence. It is very remarkable in how few of the cases the needles were the cause of death, and how slight an interference with function their presence and movement cause. From time to time their detection by a magnetic needle is proposed as a novelty; but, as Dr. Gillette reminds us, this method was employed by Smee nearly forty years ago, and has often been adopted since.

THE ANATOMY OF SUICIDE.

THE scheme and method of the "Anatomy of Melancholy" should be imitated by some competent author willing to elucidate the "anatomy of suicide." The allegation that a man has been attacked with *insanity* offers no sufficient explanation of the fact that he has committed suicide. The hypothesis of mental disease is obviously an after-thought suggested by the need of a charitable construction to avoid the penalty of self-murder. Why should the particular form of insanity set up by extreme anxiety or disappointin life happen to be suicidal? The more obvious presumption would be that if a man became insane under the extreme pressure of trouble or sorrow, his malady would form a relief from his previous state. When tension in a particular direction issues in a break down, it is natural to expect a rebound. The effect of critical stress on mind should be failure in the particular class of feelings strained, and instant recoil to a condition almost the reverse. This cannot be what happens when a man or woman driven to distraction by some reverse of fortune, or overwhelming anxiety or grief, seeks refuge in death. It would be more resonable to conclude that the mind does not give way until the faculty of endurance is overpowered by a sane, though terrible, yearning for relief in death. Suicidal insanity is a totally distinct matter. The mental symptom is clearly formulated in the system of mental disease. Nothing, however, is known to science of this convenient figment of "temporary insanity" beyond the conjecture—inspired by charity—that under certain conditions of mind-tension there may be a morbid impulse to seek escape in death. It must be obvious on the slightest consideration that the evidence required to show that an impulse, arising at such a moment, was morbid would need to be especially convincing. The natural inference, as we have said, points in the opposite direction, and would seem to argue the existence of a cowardly inclination to suicide, which the stress on endurance renders the mind powerless to restrain. Clearly such a condition would no more constitute insanity, in any medical sense, than that state of mind in which a covetous man gives way to the temptation to steal, or the creature of vile passions yields to the impulse to personal crime. This theory of being driven to distraction by "temporary insanity," and therefore excused for the commission of an act of

supreme wrong, is one which, in the interests of overworked and anxious people generally, ought to be more closely investigated, even though the result might be to discover that no vestige of apology for the self-murderer can be found, and the responsibility of self-control and endurance is not of a nature to be temporarily laid aside.

HARVEY.

A SHORT supplement to the *Prager Medicinischen Wochenschrift* has recently appeared, in which the author, Professor Gottfried Ritter, eulogises Harvey, and only deprecates that his tercentenary was not held with greater ceremony by his English brethren. That, however, which is of most interest in this pamphlet is the translation of parts of a Latin poem, apparently written during Harvey's lifetime by one who was an eye-witness of his operations. The first edition of the book in which it appears was brought out in 1691; the second edition, under the title "Musarum Anglicanarum Analecta" (e Theatro Sheldoniano, impensis Joh. Crosley), appearing in the year 1699. The poems are pedantic in the extreme, and most trying to the patience of the reader, both by their length and paucity of ideas; but amongst them is to be found a poem called "Carmen de Sanguinis Circuitu a Gulielmo Harvaeo, Anglo primum invento," written by an English theologian, Robertus Grovius (Grove), Cantab., which describes, in 493 verses, the vivisection of a dog, undertaken by Harvey to demonstrate the circulation, before an invited audience of non-medical professors. Each act of Harvey is, of course, told with great minuteness, and with a clear understanding on the part of the poet of what was occurring.

Professor Gottfried Ritter having given many well translated extracts, proceeds to make a few remarks as to the poem itself. Little though its poetical merit may be, it possesses a certain importance as regards Harvey and his great discovery. The year in which the experiment was made is not given anywhere, but Harvey is described as an old man. The poem gives fully and correctly all the peculiarities of Harvey's theory, and shows us exactly the limits of his knowledge on this point.

THE TREATMENT OF ACUTE RHEUMATISM.

THE *Glasgow Medical Journal* reports a discussion in the Glasgow Medico-Chirurgical Society on the treatment of acute rheumatism, initiated by Dr. Charteris. After reviewing the history of this subject, he came to the treatment by salicylic acid and salicin. From November, 1876, to January, 1878, Dr. Charteris had treated twenty-three cases of acute rheumatism in the Royal Infirmary (thirteen males and ten females) either by salicin or salicylic acid. Their ages were from sixteen to forty-eight. If steadily administered, the treatment relieved the pain generally within twenty-four hours, and the temperature became normal about the fourth day. He discontinued the treatment as soon as the temperature reached 99°, as it exerted a depressing effect if longer continued. He had no theory of its action. The amount of urea was notably diminished, but this would probably follow the subsidence of any fever. Though there was a general admission of the power of salicin and salicylic acid, there were some curious dissensions. Mr. John Reid seemed to sigh for the old days of bleeding, ptyalism, and blistering. Under their triple auspices he had never failed to produce a cure; and he was certain of one thing, that cardiac results were much less common than they now are. Mr. Reid will scarcely induce the profession to return to this treatment, though it is very difficult to disprove that there is a less amount of heart disease than prevailed forty years ago. Dr. Morton explained the great number of remedies vaunted in this disease on the ground that acute rheumatism is "a disease not difficult to treat." If by this he means that it is not difficult to fulfil some imaginary indication, he may be right, but in any sense of curing or curtailing the disease its treatment has until recently been so difficult that Sir William Gull fell back on mint-water. Dr. Gairdner, without discussing the general question, noted three points as trustworthy results of extensive trials in his ward:—1. No confidence could be placed in small doses of salicin; any quantity under a scruple was of no value. 2. Gonorrhœal rheumatism was not affected by salicin. 3. The effect of salicin was not dependent on, or commensurate with, its antipyretic effects. He very wisely remarked that we were apt to class many different diseases under the one name of acute rheumatism. Dr. Scott Orr said he had much experience of bleeding, on which he could not look back with great satisfaction.

IRISH MEDICAL ASSOCIATION.

THE annual general meeting of this Association was held on the 3rd inst. at the Royal College of Surgeons in Ireland. The report stated that nearly all the legislative points in relation to the Public Health (Ireland) Bill advocated by the Association and by the dispensary medical officers in their petition have been conceded by the Government, and in consequence all further opposition to the Bill has been withdrawn. The Council, whilst glad to find that the Bill to amend the Medical Act (1858), now under the consideration of the House of Lords, includes a new clause which makes compulsory a single examination for admission to the profession in each division of the United Kingdom, regret that the amending Bill does not contain any provision for altering the constitution of the General Medical Council, and are of opinion that representation on that Council should be extended to the members of the medical profession, and that each division of the United Kingdom should be duly and separately entitled thereto. The following resolutions were adopted:—"That medical officers in the Poor-law service who, through illness or infirmity, have become unfit to discharge their public duties, or who, having served twenty years, have attained the age of sixty, should be entitled to superannuation;" and "that the indiscriminate issue of tickets for dispensary medical relief which now prevails not only occupies unfairly the time of the medical officers, but also greatly and improperly increases the expenses of the poor-rate." In the evening the members dined together in the Albert Hall of the College.

THE PUBLIC HEALTH (1875) AMENDMENT BILL.

THE Public Health (1875) Amendment Bill, made further progress in the House of Lords on the 4th inst., and was ordered to be reported. The Bill is now secured, and the public may be congratulated in anticipation of this important addition to the law of the land. A motion of Earl De La Warr, that the Bill should be submitted to a select committee of the Lords, as it had already been of the Commons, was not accepted. The observations made by the different peers who took part in the discussion on the Bill, particularly the observations of the Marquis of Salisbury, were chiefly interesting from the curious insensitiveness they appeared to display as to the necessity of a water-supply as compared with the question of rental in relation to the cost of such supply. As, however, the clauses of the Bill dealing with the water-supply of individual houses appear to be retained unaltered, it is, perhaps, fair to regard this insensitiveness as more apparent than real. Of the necessity for the Bill we entertain no doubt whatever; rather, we regard it as a scandal to the Legislature that the pecuniary interest of the landlord should so long have been permitted to override the interest of the occupier in so essential a matter as that of water-supply.

THE INTERNATIONAL RECOGNITION OF DIPLOMAS.

ACCORDING to the writer in Paris of an interesting article on Medical Examinations in the *Pall Mall Gazette* of Tuesday, the Bill introduced into the Chamber of Deputies last year for prohibiting all medical men practising in France without first obtaining a diploma from one of the French Faculties is likely to be introduced again, and also to be passed. It is said to be supported by thirty-seven doctors who sit in the Lower House, and by most of the Republican party, including the members of the present cabinet. It is to be hoped that before Lord Salisbury leaves on his responsible mission to the East he will take steps to let the French Government know that a Bill introduced by Her Majesty's Government provides for the registration in England of all men with respectable foreign diplomas. Surely, such an intimation from our Government will be in time to save the Republic from going backwards on a question of great international interest. We do not ask the Government of the Republic to grant recognition to all and sundry of our diplomas. Let them recognise only good ones. But we do hope, in the interest at once of sick English people resident in France and of the good understanding that ought to subsist between the two countries, that while we are altering our law in imitation of French generosity, the Republic, of all other Governments, will not set an example of illiberality. Let us remember that in all countries Medicine is a liberal profession.

GLYCOSURIA OR DIABETES?

AT the meeting of the Paris Medical Society of the Hospitals on April 26th, a memoir was read by M. Duhomme, with a view to establish the differential diagnosis between symptomatic or transitory glycosuria and essential glycosuria or diabetes. He concludes that abstinence from starchy and saccharine food is as efficacious in glycosuria as it is powerless for good in diabetes; that the daily quantity of sugar excreted in diabetes remains almost constant in diabetes, but is subject to great variations in glycosuria; and thirdly, that whilst in diabetic urine volumetric analysis by means of Fehling's solution is easy in glycosuria, the reaction is often indefinite and difficult to obtain. This difficulty he attributes to the presence of creatinin in glycosuric urine.

POISONOUS VIOLET POWDER.

WHILE the investigation of the charge of selling violet powder adulterated with arsenic is *sub judice* we refrain entirely from comment. The matter was brought under our notice before it found its way into the public papers, and an inquiry was known to be instituted which has issued in the proceedings now in progress. It would not surprise us to find that the "violet powder" of commerce too generally, and many of the preparations sold as innocent for use in the toilet and the nursery, are at the present moment subjected to adulterations more or less mischievous, which do not fall into the category of "accidents," and have only the greed of gain for their excuse.

THE BIRMINGHAM MEDICAL BENEVOLENT SOCIETY.

THE annual meeting of this useful provident and benevolent society was held on May 31st, under the presidency of Mr. A. Freer, of Stourbridge. The directors' report was, on the whole, satisfactory, but "so closely had the expenditure followed upon the revenue that the directors felt they must exercise increasing care over the funds of the Society, since the expenditure of the present year probably would not allow them, without overdrawing their banking account, to invest the proportion of subscriptions necessitated by the laws of the Society." There are now thirteen annuitants of the Society receiving from £30 to £40 per annum, and, in addition, one indigent member received during the past year a temporary grant of £20. The total number of members is 238, and the invested funds amount to £8970. The profession of the Midland district are to be congratulated on the possession of so good a society, and of being able to afford so much assistance to their more necessitous brother practitioners. Dr. Nason, of Stratford-on-Avon, is the president-elect.

THE BRAIN IN ATROPHY OF THE ARM.

M. MARC SÉE has presented to the Sociôté de Chirurgie the brain from the body of a man brought into a dissecting-room, of which the right arm was atrophied as if from infantile paralysis. A marked difference in size existed between the right and left ascending parietal convolutions; the former being of normal size, and the latter considerably smaller. M. Sée asks whether this is a mere coincidence or not, and does not venture to give an answer in the face of the contradictory opinions of MM. Charcot and Luys on the subject. The case is, however, of much interest on account of its coincidence with that recently brought by Dr. Gowers before the Medical and Chirurgical Society, in which an atrophy of the middle third of the same convolution co-existed with a congenital absence of the hand on the opposite side.

INQUESTS IN ROYAL PALACES.

IT would be interesting to learn whether the rules governing the practice of coroners appointed for the Royal palaces are so exceptional that it is *legal* to hold an inquest with a jury "selected from the Queen's" servants, and to conduct the inquiry "with closed doors." If this be the fact, something should be done to make it clear to the general comprehension that any useful purpose is fulfilled by appointing a coroner under the conditions named. If the removal of mystery from death occurring on Royal premises is not important to the public interest, it would seem better to dispense with the formality of inquest altogether. As the proceeding is at present conducted—to judge from the newspaper reports of an inquest held a few days ago at Windsor Castle on the clerk of her Majesty's stables,—it is little, if at all, better than a farce.

HARVEY TERCENTENARY MEMORIAL FUND.

THE subscriptions now exceed £1650. During the past week Colonel Charlesworth has contributed £20, through Sir James Paget; and the Faculty of Physicians and Surgeons of Glasgow has given £21 to the fund. The accounts are to be audited on Tuesday next, before which date the honorary secretaries request that all promised subscriptions may be paid. A meeting of the London subscribers to the fund will, by the kind permission of the President of the Royal College of Physicians, be held on Wednesday next, the 12th instant, at 5 P.M., at the College, Pall-mall East, when it will be proposed that the Executive Committee be instructed to make arrangements for the selection of the artist to whom the work may be entrusted.

SOCIÉTÉ D'AUTOPSIE MUTUELLE.

THIS Society has just lost one of its members, M. Louis Asseline, upon whose body, in accordance with the rules of the Society, a post-mortem examination was made by M. Broca. Membership of such a Society might almost seem in this case to have been a wise prevision, for the cause of death was of considerable interest—rupture of the left auricle of the heart, the consequence of fatty degeneration.

The brain weighed 1460 grammes, a little above the normal. The fronto-parietal sutures were not ossified, as they commonly are at the age of deceased (forty-nine years). Ossification of the sutures occurs earlier among inferior races than in Europeans, and it is suggested that the retardation may be due to cerebral activity.

ON Monday last the annual elections for President, Vice-President, Secretary, and Council of the Royal College of Surgeons in Ireland took place. Mr. Smyly was duly elected president, Mr. Mapother vice-president, and Mr. Colles secretary. For a seat on the council there were twenty-four candidates for nineteen places, and of the outgoing councillors who offered themselves for re-election all were elected with the exception of Mr. Albert Walsh. The new members are Mr. Croly, Mr. Elliott, Mr. Jacob, and Mr. McDonnell, the outgoing president. One hundred and twelve fellows recorded their votes.

AT a meeting of the Faculty of Physicians and Surgeons of Glasgow on the 3rd inst. Dr. Benjamin Ward Richardson, F.R.S., was elected an Honorary Fellow. This is the only distinction of a purely honorary character which the Faculty have it in their power to confer, and it is a power which they exercise very rarely.

THE poll of the governors of the Royal Surrey County Hospital, Guildford, upon the proposal to charge out-patients one shilling or two shillings upon each letter, resulted in its being negatived by a majority of six.

Nature for May 30th contains an exquisite steel engraving by Jeens of the portrait of Harvey in the Royal College of Physicians.

SANITARY IMPROVEMENTS AT GREAT YARMOUTH.

YARMOUTH, which had earned an unenviable notoriety in the past for its eminently insanitary condition, and for years stood conspicuous as suffering from an exceptionally high death-rate from diarrhœa, has started on a career of improvement which, if pursued with vigour, will render this most frequented of our East-coast watering-places also one of our best health-resorts. The work of sanitary reform has now been going on for three years, and the details were described in our pages last year in the report of our Sanitary Commissioner on English Watering-places. The original impetus to the improvements, now completed or still under progress, was doubtless the outcome of the repeated comments of the Registrar-General in his quarterly reports on the fatality suffered year after year by the infant population of the town from diarrhœa. The result of the work already accomplished is seen in the diminished death-rate and a considerably lower fatality from diseases of the zymotic class. Thus in 1875 the annual mortality per 1000 was 23·02; in 1876, 20·01; and in 1877, 19·29. Whilst the fall in the death-rate in the zymotic class is still more extraordinary, being 4·6 in 1875, 3·3 in 1876, and 2·3 in 1877. During the past year, to judge from the medical officer's report now before us, no diminution in sanitary activity is perceptible. An infectious diseases hospital has been erected, with accommodation for twelve patients, with detached convalescent ward, mortuary, disinfecting house, ambulance shed, and laundry—all enclosed within a high wall. More than 150 notices for closure of impure wells and for the laying on of the Company's water have been served. The necessity for this action will be appreciated when we say that the water taken from these wells, on analysis, was found to be of the vilest description. Mr. Sutton, reporting on these well-waters, justly observes:—"I have no hesitation in saying that the physiological action of the Yarmouth well-waters upon human beings is disastrous: the general fluids of the body become highly charged with saline matter, and a state of circulation is produced which highly disposes to typhoid fever, diarrhœa, and eruptive diseases." The system of night-soil removal, where required, and the town scavenging, have undergone great improvement. The excellent system of ventilating the sewers was fully noticed in our report, but we regret to find that no steps have as yet been taken to secure adequate flushing for them. This is most urgently needed, and would do much toward the removal of the offensive smell from the sewers complained of so greatly during the summer months by visitors to the town. Owing to the flatness of the ground, it is impossible to obtain much fall for the two main sewers of the town; and these, moreover, empty themselves into a tidal river, so that when the tide is up no exit of sewage can take place. Consequently a deposit of sewage is apt to occur, especially during the summer and dry season of the year, which, by its putrefaction, gives rise to the evolution of dangerous and offensive gases. Adequate flushing of the sewers is therefore an imperative necessity for Yarmouth, and we hope to hear that the Sanitary Authority have seriously undertaken the task of providing it. In the present report a proposal has been put before them suggesting a large iron tank on wheels, with a large tube from beneath that might communicate with the head of the sewer. The tank being placed in position could be filled from the water-mains, and when full, suddenly discharged, giving exit to a large volume of water. A movable tank, that could be wheeled from one sewer to another, would save the immense expense of constructing numerous separate tanks, and the plan, in such a level town as Yarmouth, seems very feasible.

THE ART OF DINING.

(By a Diner-out.)

LET me, first, make some remarks on the ordinary dinner of everyday life, and then enter more particularly into the nature of those repasts furnished at dinner parties in this country.

When we consider how very largely the health and well-being of the community are influenced by the composition of the chief daily meal, and the conditions under which it is partaken, we cannot but think it has lacked much wisdom in the] composition of its parts, and that it has been too much the fashion of society to resign itself to the despotic sway of the cook, confectioner, or connoisseur, who almost always lacks medical knowledge to render his selection salutary as well as artistic.

Now, in the ordinary dinner of everyday life in the middle-class and the lower middle-class the importance of a fair proportion of soup, fish, and vegetables is lost sight of, too much stress being laid on the joint, which is supposed to be the one necessary. If regard be had to the conditions under which men now-a-days work, we consider that a man who has been toiling all day in his shop or office is not usually in a fit state, on his arrival at home, to sit down to a heavy meal, or even to one consisting of a single dish, and that of meat. There is probably not a man but who has in his life experienced the distressing sensations of sitting down to dinner with a ravenous appetite, and feeling, before five minutes were gone, that his stomach was distended, and that he was completely done up. When a man is wearied, fatigued, or anxious, his stomach is not n a fit condition to receive a heavy meal, and, whilst at his dinner, he ought to be resting. Now, if he preface his meal with some light gravy soup and a piece of stale bread, he will not experience the unpleasant distension, for the fluid will be rapidly absorbed, and distribute a feeling of warmth, comfort, and strength throughout his system. If he next partake of fish, properly cooked, he will feel fresher and lighter, and be quite ready for the reception of a moderate amount of meat; and I venture to say that the man who has taken such a meal will not only feel, but will be, better

than he who has consumed half a pound of solid meat by itself. The one will be able to amuse himself for the rest of the evening, whereas the other will seek his sofa, or fall asleep in his armchair.

Then, again, in this country, vegetables and fruit are taken but sparingly, relatively to the bulk of food consumed each day. Not only should vegetables be eaten with meat, but I hold that they ought to constitute a separate "plat" after the meat, as in France. Nothing can be better than a potato with the joint, and afterwards peas or asparagus served as a clean savoury dish. What can be nicer, more economical, or nutritious, when but few vegetables are in season, than a dish of "haricots blancs" properly cooked? Then, again, why cannot we, in this country, finish our dinner, as in France, with a dish of "maccaroni au gratin," which would be a cheap, nourishing, and savoury substitute for the many indigestible messes which go by the name of puddings and pies? No Frenchman would consider his dinner complete without a salad—a thing too rarely seen on the English dinner table. One of the reasons, no doubt, why the salad is not enjoyed here as it is in France, is that there are few cooks who know how to make a salad, but I consider it is just one of those things that every English lady ought to know how to do. In this country the salad is steeped or soaked in water before it is sent up, so that it arrives at table a sodden uninviting mass, whereas, in France, a salad is never washed, but each leaf is separately wiped with a damp cloth, so that it goes to table a crisp and elegant dish. It would do an English cook good to see the way in which her French representative handles a salad, fondling it as gently as if it were a new-born babe.

If Paterfamilias could always have his cold mutton prefaced by some soup or fish, and then served up with a delicious salad, he would probably find it more agreeable than when it constitutes, as at present, a constantly recurring dish in so many households. English cooks are proverbially wasteful, and whereas the French would make delicious soup out of bones and vegetables, an English cook would require pounds of solid meat. In nearly all households there is a great lack of variety in the daily dishes. Nothing is more hateful to the stomach than a repetition of the same dish day after day. If a man were fed daily on partridges and champagne, the time would come when he would almost loathe the sight of them, and would turn with relish to a crust of bread and cheese, to be washed down by a glass of small beer. The present generation has probably forgotten that in days gone by the indentures of the Gloucestershire apprentices contained a clause to the effect that they should not be required to eat *salmon* more than thrice a week.

I would now make some observations on the *menu* of a dinner party. For a dinner party to be enjoyable it must take place under certain physical conditions. The room ought to be well ventilated, of moderate temperature, and not lit with gas. But what do we see? Dinner parties usually take place in the sweltering heat of June and July, months as unsuitable as could be chosen for the purpose, *al fresco* entertainments excepted. Two reasons may be assigned for selecting so objectionable a period. First, these months mark the height of the London season, but the second reason is the more weighty one, because the ladies are in the case. They like their dinner-tables to look nice, and as fruits and flowers are both scarce and dear in the earlier months of the year, they induce their spouses to postpone giving their parties till shortly before the dog-days, and thus the substance is sacrificed to the shadow. There is no reason why the middle class, who constitute the great bulk of society, should not give their dinner parties in the winter months, which are by far the most enjoyable for such social gatherings, for the middle of October witnesses the return to town of nearly all the mercantile and professional classes. Even the upper ranks might change the time of their parties to cool months like February and March, when Parliament is sitting and town nearly full. So much for the period of the year at which dinners are held.

There are two radical faults in the construction of the *menu*. The host draws it up with the intention of allowing his guests to *select* their dinner from a large variety of dishes, but his wishes are entirely frustrated by his waiters, who dole out the dinner on the supposition that each guest wants to taste a little of *every* dish on the card. If, for example, a guest should elect to make his dinner off three or four dishes he would go away hungry, for he would have meted out to him little more than a mouthful of each dish, and etiquette would entirely forbid him from asking for more. The inordinate length of the *menu* makes waiters help very sparingly of each dish. Within the past few years dinners have been made more simple and the *menu* greatly contracted. It is, however, still too long, and dinners are thereby rendered wearisome. Madame de Pompadour considered forty-eight dishes *de rigueur*, but there is no reason why we should follow her example, and the twenty or twenty-four dishes which now figure on a *menu* might with great advantage be reduced to a moiety. The quantity would be lessened, but the quality would be improved. It may be said of most dinners that you have put before you a great deal of what you do not want, and that you miss something which you would like. Some things look very well in a confectioner's shop, but they do not sit very well in a guest's stomach. At how many houses do you get oysters and turtle soup? The real fault is that the *menu* is often the production of the cook or confectioner, the connoisseur's art being conspicuous by its absence. What is required is quality rather than quantity. For instance, no dinner is complete without the delicious bivalve if it be in season. Why is it that our choice "natives" are so rarely seen on a dinner table? Someone, perhaps, would reply, "They are so dear." I think the host who grudges his guest half-a-dozen oysters had better not give a dinner. The dinners are usually at a late hour; the male portion of the guests may have had a hard and long day's work, and for them especially, as for all, there can be no more nourishing or light prefix to the repast than half-a-dozen oysters. Two soups generally appear on the *menu*, a thick and a clear. I look upon it as a piece of barbarism to preface a good dinner with a basin of thick soup. A thick soup with a junk of bread is itself a dinner, and its appearance on the *menu* suggests the idea, which is of course erroneous, that the host is imitating the practice of certain schools in which the pudding is for obvious reasons served up before the meat. No connoisseur would ever commence a good dinner with a basin of thick soup, and if we are told that it is put on the *menu* because some one would prefer it, the answer is that if the guests don't know what is good for them the host had better not allow them any choice. Nothing but a clear soup ought to be tolerated; for the winter, clear turtle; and for the summer, some light gravy soup with some vegetables in it.

Fish is not usually sufficiently represented on the *menu*. Of all dishes, there is nothing so light, elegant, and harmless as fish, which is far more nourishing than people credit it with being. Of variety there is no end, and the ways of dressing it are many. Indeed, fish ought to constitute a very large portion of the dinner. There ought to be at least two kinds—a boiled and a fried; in summer a third may be added—the souchet—a delicious dish in hot weather. As the dog-days approach a judicious interpolation of cold dishes is desirable—for instance, hot salmon is well replaced by a dish of the same fish served up as a mayonnaise iced. *Entrées*, to be acceptable and digestible, ought to be very light, whereas, as a rule, they are somewhat heavy and stodgy. There ought to be two of them, the one boiled and the other fried. In hot weather, one of the dishes ought to be cold—for instance, a *suprême de volaille à l'aspic glacé*. The *entrées* constitute the backbone of the dinner; nearly every one partakes of them, and much care and attention ought therefore to be bestowed on them.

I now come to the removes, as represented by the joints. The appearance of a joint on the *menu* is a barbarism little known, happily, outside this country. One would have thought that an Englishman would have had quite enough of the eternal joint at home without wishing to see one at his host's table. There seems to be a popular fallacy in this country to the effect that a man cannot be said to have dined unless he has partaken of the joint, and hence a joint is *de rigueur*, except at a dinner given by a connoisseur at his club. I object to the joint on the following grounds. It is the fashion, and a very good one, to serve up the dinner *à la Russe*. Were it otherwise, all the host's time would be occupied with carving for his guests, and he would have to go dinnerless, besides undergoing an uncalled-for amount of fatigue. The joint therefore is put on the side-table for the waiter to carve. Now, it falls to the lot of but few men to be good carvers, and the result is that each guest has too often put before him a ragged piece of meat; one guest finds that his portion is largely composed of fat, whereas perhaps his companion has his

share all lean, and would be glad of a little fat. Look at an Englishman's plate when lamb is in season. Can anything be more unsightly? Meat, potatoes, asparagus, or peas, all mixed up in one unsightly mass, rendered sodden and unsavoury by the unhallowed combination of mint-sauce and melted butter, thereby spoiling the flavour of two good things—the lamb and the asparagus. Now, if the lamb had been served up, not as a joint, but as cutlets, with green peas or asparagus, we should have had a delicate and elegant dish; and if the asparagus had been dished up as a separate "plat" at the head of the *entrémets*, as in France, we should have had an exquisite delicacy which is never so enjoyable as when taken by itself. The great advantage of not allowing a joint at a dinner is, that instead of a mangled piece of meat we have a savoury, sightly portion cut and dressed by the cook at her leisure. Take, for instance, a sirloin of beef. Why not cut from it its choicest part, the fillet, and serve it up elegantly in the shape of fillets, with mushrooms or olives? A bird usually figures as the "roast," and care ought to be taken to select one which, like the plover or snipe, has a bitter flavour, for a guest might as well eat a barn-door fowl as a partridge or pheasant at this stage of the dinner. The salad ought now to make its appearance. It can either be eaten with the roast, if there be no vegetables with it, or it can form a separate and delicious "plat" by itself as a lobster salad. I now come to the *entrémets*, or sweets. On looking at the *menu* of our host we can at once see whether the dinner is sent out from the confectioner's or not. The confectioner always rides his hobby to death, and makes what ought to be a very slight interposition a veritable *pièce de résistance*, hence his dinner is marked by the inordinate number of the *entrémets*, for, to use a common expression, "he is great at sweets." I say that the fewer sweets that appear in the dinner the better for the reputation of the host and the welfare of his guests' stomachs. At most of the dinners given at London clubs the sweets are conspicuous by their absence, and it would be well if the good example were more extensively followed. At the end of a good dinner a mass of sweets and pastry are most objectionable. All that is required is a plain wine jelly, which is cool and refreshing to the palate. Connoisseurs very properly finish a dinner with salt fish in some form or other, in order to cleanse and sharpen the palate, and render it in a fit condition to appreciate the wines. I look upon ices as calculated to do good to only portions of the community—the dentists—for nothing can be more injurious to the enamel of the teeth than inserting in the mouth a substance which reduces the temperature from blood-heat to freezing-point. Regarding wines I must say one word. People usually mix their wines too much; it would be far better if they could confine themselves as much as possible to one wine, and for a dinner nothing can excel really good champagne—innocent, exhilarating, and refreshing.

PARISIAN NOTES.

(From our Roving Correspondent.)

AN important ceremony, which was not, however, devoid of certain comic elements, took place on the morning of the 31st ult., on the outskirts of the Paris Exhibition. Men of science, men of letters, and some distinguished members of the Paris Faculty were convoked to meet as early as half-past eight in the morning, on the Passy, or furthest side of the Trocadéro. It was argued that men of learning rose early in the day, and that they would feel no inconvenience if there was any chance of forwarding their special interest. The Exhibition of Anthropological Sciences was to be opened at that hour by the Minister of Agriculture and Commerce, M. Teisserand de Bort, and accordingly the anthropologists gathered in force and in full dress, despite the grey of the morning. After the usual and profuse exchange of salutations and a brief speech, the Minister was led round to the various exhibits and their meaning, history, and importance carefully explained. At first, everyone was most enthusiastic. M. Teisserand de Bort took the greatest interest in all that was shown him, and was most particular in examining the various relics and specimens; but when the investigation was prolonged beyond the breakfast hour, the patience of even the most devoted anthropologists gave way, and, sacrificing science to the cravings of the inner man, they were loud in their complaints, instead of expressing their gratitude for the attention they received. For three hours the Minister continued his inquiries. Anthropology has never received such marked attention at the hands of a powerful Government, and yet its disciples allowed the paltry considerations of a delayed breakfast to mar the enjoyment of their triumph.

From a medical point of view, this exhibition is of considerable interest. It includes special illustrations of the science of vital statistics, and the statistical maps of France and other countries are ably compiled and illustrated. Their significance can be understood at a glance. The tables exposing the fluctuations of the death-rate in various countries, notably England, France, and Belgium, are instructive, as also maps denoting the climates of various parts of the world. In a map of the town of Brussels pins of various colours indicated the precise spots where different forms of zymotic disease prevailed; from which it could seen at a glance that small-pox raged principally in the neighbourhood of the Palace of Justice. In one street it seems to have attacked the inmates of nearly every house. This simple and practical method of record might be adopted with advantage by our sanitary authorities.

Craniology and the study of the brain may be pursued here with advantage. Dr. Oré has some fine galvanoplastic reproductions of human brains and the brains of dogs and calves, nor should mention of Prof. Broca's process for the preservation of the brain in a dried condition be omitted. Dr. Paul Topinard displays, however, the most curious exhibits. This eminent surgeon has studied extensively in England, and he was one of the first who proclaimed to the French Faculty that surgical operations performed in English hospitals were twice as successful as in France. The enormous difference in the results realised he attributed first to the excellence of the method of bandaging practised in England; secondly, to the superior sanitary condition of our hospitals; and, thirdly, to the fact that the patient was not deprived of the stimulants and food to which he was accustomed. Among other curiosities Dr. Topinard shows highly magnified transversal cuts of human hair, demonstrating the varieties characterising different races.

Altogether the science of anthropology will be advanced by this exhibition, and it is to be regretted that England is not better represented. Specimens from the museum of the College of Surgeons, from the collections of Mr. John Evans, the President of the Anthropological Society of England, Mr. Flowers, and Mr. J. Park Harrison, are among the notable objects exhibited. A feature of interest was the collection of arrow-points and ornamental stones from Portugal as fine as any found in Ireland. This opens out a new field for exploration. Another result of the exhibition will be to prove the localisation of the polished stone period, while the whole world of science will hasten to contemplate the carved bones discovered by M. E. Massenat, and dating from the glacier and mammoth period.

An interesting ceremony was performed last Sunday. The Roman-Catholic party has suddenly become impressed with the fact that, though there are night asylums in Madrid, Marseilles, Brussels, and casual wards in London, nothing of the sort exists in Paris. Subscriptions have consequently been opened, large premises secured in the poor quarter of Batignolles, and these have just been inaugurated with due solemnity, and opened to the poor. Here a bed, some water, and a sailor's biscuit is given to anyone, irrespectively of nationality or creed, whose poverty justifies his application for help. Of course, there is much to be said for and against this indiscriminate form of charity; but this movement will doubtless mitigate much suffering, and do great good, if its effects are not nipped in the bud by the spirit of propagandism. Its promoters are all strong party-men, and will have much difficulty in clearing themselves from the suspicions of party motives, notwithstanding their professions of neutrality. The Comte des Cars is the Vice-President of the society, and the Baron de Livois its President, while such names as that of the Marquis de Plœuc, late director of the Banque de France, figure among the committee. If, however, pure and disinterested charity remain the motive power of this association, it will prove of much service, by inculcating among the extreme poor some principles and knowledge of hygiene. Dr. Passant, one of the most prominent French sanitary reformers, is

attending to this phase of the question. He hopes to introduce gutta-percha bedding, which will be regularly washed with an antiseptic solution, and to insist on a bath as an indispensable preliminary. To wash a dirty man is to save society from one of the dangers that menace public health; and it is a hopeful sign when we note that these principles are gaining ground even in the slums of Paris.

Speaking of Dr. Passant, I ought to say that he is the founder of the Medical Night Service which has been adopted in Brussels, St. Petersburg, Paris, and within the last month or so in the town of Algiers. Experience has shown that in towns visited by a great many foreigners, doctors are liable to be disturbed in the night by strangers who as often as not fail to pay the fees. Hence a great many medical men refuse to go to visit strangers in the night, and these latter are often perplexed to obtain the assistance they require. Dr. Passant, therefore, suggested that a medical man should be attached to each police-station. Thus in Paris and the other towns mentioned a stranger not known to any doctor should at once apply to the nearest police-station. A policeman will immediately fetch the doctor attached to the service, and accompany him from his house to that of the patient and back again home, thus protecting him from the thieves, who often call a doctor out during the night for the express purpose of robbing him. The fee is fixed at ten francs, and if the patient is too poor to pay this, the policeman who is there to witness the circumstance gives the doctor a ticket for the amount, which is immediately cashed on presentation at the Prefecture of Police. Thus the stranger can always count on prompt and competent medical attendance; while, on the other hand, the doctor is certain not to be disturbed in vain, he is protected and has his fee secured by the administration.

Correspondence.

"Audi alteram partem."

ANTISEPTIC SURGERY IN LARGE HOSPITALS.

To the Editor of THE LANCET.

SIR,—Amid the multitude of statistics I have as yet seen none that would point out a striking diminution of mortality in large hospitals where the older plans of treating operation-cases have become replaced by the strict antiseptic method of Lister. Now, in the Newcastle-on-Tyne Infirmary, where major amputations are numerous, we have a good basis for statistical comparison, for during the last three years Lister's method has been invariably and rigorously carried out, whereas in the preceding three years the "carbolic oil" and other simple methods were employed. Arranging the details of these years systematically, we have:—

Year.	Major amputations.	Deaths.
1873 ...	27 ...	16 (or 59·2 per cent.)
1874 ...	41 ...	19 (or 46·3 per cent.)
1875 ...	30 ...	14 (or 46·6 per cent.)
Antiseptic years.		
1876 ...	26 ...	6 (or 23 per cent.)
1877 ...	32 ...	5 (or 15·6 per cent.)
1878 ...	50 ...	2 (or 4 per cent.)

Taking the total of each period of three years, we have formerly 98 amputations, with 49 (or 50 per cent.) deaths; latterly 108 amputations, with 13 (or 12 per cent.) deaths.

Moreover, in the former period there were 8 double amputations, with 5 deaths; in the latter, 4 of these, with no deaths.

The results of the last year would call for more special comment, for the 3 double amputations and the 13 amputations of the thigh (8 of them primary) were all successful; while the only 2 deaths from the total 50 major amputations followed amputation at the hip-joint for injury. I may add that of 6 cases of ovariotomy, 4 recovered. Even making due allowance for other important sanitary improvements of recent years, I cannot but think that the statistics here recorded will sufficiently point out the great security ensured by the adoption of Lister's method in large hospitals, where major operations are frequently performed, and the wards are teeming with grave surgical cases.

I am, Sir, your obedient servant,
L. J. HOBSON, M.B., F.R.C.S.,
House-Surgeon.

Newcastle-on-Tyne Infirmary, May 30th, 1878.

*** Surgeons and patients at the Newcastle-on-Tyne Infirmary are to be congratulated on the low mortality during the last three years as compared with the enormous excess of the three previous years. A mortality of 50 per cent. is appalling, and whatever may be the representative value of 12 per cent. for the antiseptic system, no one would pretend that 50 per cent. is a fair average of the mortality under the best non-antiseptic methods.—ED. L.

HYDATID IN THE FEMALE BREAST.

To the Editor of THE LANCET.

SIR,—The extreme rarity of cases of "hydatid" in the female breast must be my excuse for asking you to put on record the following case.

Mrs. S——, the mother of five children, came to consult me in March, 1878, for a tumour of the left breast, which she had been troubled with for the last six years. When she first noticed it, it was about the size of a pea, and could be moved about under the skin. It gradually increased in size, and during the latter part of the six years she suffered slightly from shooting pains in the breast, which extended up into the left armpit. The pain was not worse at night, and there was no glandular swelling in the axilla or history of tumour in the family. She was living far up in the north of the continent, and so had put off getting medical advice, especially as the pain was never very severe. Some time before, I had her servant under my care with five or six "hydatid" tumours of the liver, from which she died, and this inclined me to make the diagnosis of "hydatid"; but as several other medical men thought it was "fibro-cystic," and as the patient would have nothing done without ether, I determined to remove it. This was done by an incision about four inches in length, and the "hydatid" cyst was found to be about the size of a goose's egg, containing about six or seven small daughter-vesicles. The base of the tumour was situated in the pectoralis major muscle, from which it was carefully dissected and removed entire with a small portion of the surrounding fat. The wound was sponged out with chloride of zinc (30 grains to the ounce), and healed by "first intention."

WILLIAM GARDNER, M.D., Ch.M. Glas.,
Late Senior House-surgeon, Adelaide Hospital.

Adelaide, South Australia, April 17th, 1878.

DISCHARGE OF A LARGE BILIARY CALCULUS BY ULCERATION THROUGH THE ABDOMINAL PARIETES.

To the Editor of THE LANCET.

SIR,—Mr. Cookson, of Halifax, and Mr. Yeldham, of London, having reported, on January 5th and 19th, an instance of a case in which biliary calculi escaped by ulceration through the abdominal walls, I beg to send you the notes of a case which has been under my care.

Mrs. E——, aged seventy-four, residing at Langford, Essex, had, ten years ago, three attacks of severe pain, followed by jaundice. After the last attack she passed several gall-stones about the size of small peas. She remained in good health until August, 1877, when she consulted me, and on visiting her, I found in the right hypochondriac and epigastric regions a very hard swelling six inches in diameter, from which she was suffering acute pain. An abscess formed, which burst on Nov. 13th, and a large quantity of offensive pus came away. On Dec. 28th a large oval calculus passed through the opening.

The patient's health now rapidly improved, her appetite became good, and the pain mitigated. There was considerable swelling and induration. A probe could be passed three and a half inches into the opening, which assumed the character of a fistula discharging serous fluid.

She continued in this state upwards of three months, when

she was taken with pain followed by jaundice and considerable hæmorrhage from the opening. She died April 28th.

The calculus weighs 170 grains, and measures 3¼ inches in the long and 3 inches in the short circumference.

I am, Sir, yours truly,

EDWIN PARKER GUTTERIDGE, M.R.C.S. Eng.

Maldon, Essex, May, 1878.

SECTION-CUTTING BY MEANS OF ETHER SPRAY.

To the Editor of THE LANCET.

SIR,—In THE LANCET of April 27th an article appeared directing the attention of pathologists &c. to a new method of section-cutting by means of ether spray. Now, this precise method of using the spray for microscopic purposes was previously mentioned in your journal (Feb. 19th, 1876) more than two years before, and in a paper in which ether spray was for the first time recommended to microscopists. The so-called *new* method was consequently the very first of those adopted for the purpose, and the apparatus, of which a woodcut was published, was the same as that now advised by Dr. Smith. I have no doubt he was not aware of this, but a moment's comparison of the two papers will convince him of the fact.

I myself now use a different, and, I think, a better apparatus on the same principle.

I am, Sir, yours faithfully,

CHARLES COPPINGER,

Surgeon to the Mater Misericordiæ Hospital, Dublin.

May 30th, 1878.

PARLIAMENTARY PROCEEDINGS.

HOUSE OF LORDS.

Tuesday, June 4th.

MEDICAL ACT (1858) AMENDMENT.

THEIR Lordships having gone into Committee on this Bill, Clauses 1 and 9 were agreed to. Clause 3 was also agreed to after some verbal amendments introduced by the Marquis of Ripon. On Clause 4, which would have made it necessary for a person who had passed the joint board examination to obtain a medical diploma from one of the existing medical authorities before he could be placed on the Medical Register, the Marquis of Ripon moved an amendment to make such diploma unnecessary for the purposes of registration. The Duke of Richmond and Gordon approved the amendment. The amendment was agreed to, and Clause 4 as amended, and the remaining clauses, after verbal amendments, were ordered to stand part of the Bill. The Bill was then passed through Committee and reported to the House.

Obituary.

DR. KOVACS-SEBESTENY ENDRE.

AN eminent member of the profession has just passed away very suddenly at Budapest, in Hungary. The accounts we receive of the expression of universal sympathy with the family of the deceased, and of the respect shown by crowds of rich and poor who followed his remains to the grave, testify to the worth of the man while he lived and to the just appreciation of the services which our profession is capable of rendering to suffering humanity in any country.

Dr. Kovács was for years past the leading medical authority in Budapest. Apparently in usual health, he was attending to his patients, and whilst prescribing for one of them who had just sent for him, Dr. Kovács complained of a sudden pain in the head. He fell, and died almost instantly. The autopsy revealed an unsuspected aneurism of the aorta, the bursting of which carried him off, at the age of sixty-three.

Dr. Kovács was the son of a Protestant clergyman, and received his medical education at the University of Budapest. At first an assistant to the celebrated surgeon, Balassa, he soon obtained an extensive practice, and became a well-known name in the Hungarian medical and scientific literature. Subsequently he became the intimate friend and professional adviser of the great Hungarian patriot, Deák, and the Sovereign repeatedly bestowed royal favours on Dr. Kovács. He was buried on the 20th of May, followed by thousands to the grave.

Among the many wreaths put on his coffin was one with the inscription, "From the Government of Hungary," placed there by the Ministers of State, three of whom took part in the funeral procession. There were also present the Presidents of both Houses of Parliament, numerous members of the aristocracy and of the Academy of Sciences, &c.

Medical News.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on May 30th:—

Alden, Ebenezer Wenham, Oxford.
Castle, Hutton, Newport, Isle of Wight.
Homes, James, Ledbury.
Hughes, Thomas Montgomery, Kennington-road.
Lighton, H. Alfred Hamilton, Ross.
Lynn, Edward, Woolwich, Kent.
Michael, Henry James, Colchester.
Watson, Evan John, Durham.

The following gentlemen also passed the Primary Professional Examination:—

Henry Louis Preston Hardy and Arthur Lloyd Jones, London Hospital; Alfred Cox Wey, Middlesex Hospital.

[In the Primary Examination list published on March 16th, for "St. Mary's Hospital," following the name Frederick Enos Fenton, substitute "St. George's Hospital."]

ROBERT SMITH, L.R.C.P. Edin., of Fochabers, has been placed on the Commission of the Peace for the county of Elgin.

DR. COATES, of Portumna, has received a severe fracture of the hip by being thrown from a croydon, caused by his horse becoming restive and bolting.

MR. WILLIAM EDDOWES, late medical officer for the Pontesbury district of the Atcham Union, has obtained a superannuation allowance of £50 per annum.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Professor T. Spencer Wells will commence his course of six lectures "On the Diagnosis and Surgical Treatment of Abdominal Tumours," on Monday next, at 4 o'clock P.M. The final examination for the Fellowship of the College terminated on Monday last; of the twenty-two candidates who entered for it seventeen were successful.

CONVALESCENT HOSPITAL, BLACKROCK.—The late Mr. Mullins, of Dublin, who died about six years since, having left a large sum of money for charitable purposes, a Convalescent Hospital has been recently finished at Blackrock, near Dublin, and is now ready for the reception of patients from certain of the city hospitals. By the testator's will a large sum is available for its permanent endowment.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—The following office-bearers were elected on the 3rd instant for the ensuing year:—President: Philip Crampton Smyly. Vice-President: Edward D. Mapother. Secretary: William Colles. Council: John K. Barton, Samuel Chaplin, William Colles, Henry Gray Croly, Anthony H. Corley, John Denham, William A. Elliott, Edward Hamilton, Archibald H. Jacob, George H. Kidd, Edward Ledwich, Rawdon Macnamara, Alfred H. McClintock, Robert McDonnell, Benjamin F. McDowell, Benjamin G. McDowel, George H. Porter, William Stokes, T. Jolliffe Tufnell.

PRESENTATIONS.—Dr. Robert Morton has been presented with an address and 200 guineas on leaving Castleblaney, county Monaghan.—Dr. Joshua R. Harvey has been presented, on the occasion of his retirement from practice, with an illuminated address in gilt frame, and a silver tea-kettle.—Mr. John Todd has been presented with a handsome clock and side ornaments, principally by the subscriptions of the poorer classes, to testify their appreciation of his kindness to them during the time he was resident medical officer to the Lancaster Infirmary and Dispensary, and especially during the scarlet fever and small-pox epidemics.

ON June 3rd, 1878, the Lord Viscount Kilcoursie, R. Faircloth, Esq., F.R.C.S., J. Lawrence-Hamilton, M.D., and William Ford Stanley, Esq., were elected members of the Royal Institution of Great Britain.

BIRMINGHAM MEDICAL BENEVOLENT SOCIETY.—The annual meeting of this Society was held at the Medical Institute, Birmingham, on May 31st; Mr. Alfred Freer, the President, in the chair. The report of the Society showed that 31 new members had joined during the year, the number of members now being 238. £445 had been given in grants to 13 annuitants during the year. Mr. Watkin Williams was elected President; Dr. J. J. Nason, of Stratford-on-Avon, President elect; Mr. T. Elkington, of Fenny Compton, and Mr. J. Garner, of Birmingham, Vice-Presidents; and Mr. T. H. Bartleet was re-elected Honorary Secretary for the ensuing year.

Medical Appointments.

BINDLEY, C. A., M.R.C.S.E., has been appointed Medical Officer for the Brighouse District of the Halifax Union, vice Pugh, resigned.

BISDEE, A. J., M.R.C.S.E., L.S.A.L., has been appointed House-Surgeon to the Victoria Hospital for Children, Queen's-road, Chelsea, vice Trewman, whose appointment has expired.

BOOLE, J. H., M.B., C.M., L.M., has been appointed Medical Officer and Public Vaccinator for the No. 1 District of the Hailsham Union, vice Cunningham, deceased.

BROWNE, A., L.R.C.P.Ed. & L.M., L.F.P.S.G., has been appointed Medical Officer for the Kirkheaton District of the Huddersfield Union, vice Gardiner, resigned.

CAMPBELL, P., M.B., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed House-Surgeon to the Leith Hospital, at £70 per annum and board, vice Dick, resigned.

CLARKE, J., Jun., L.R.C.S.I. & L.M., L.K.Q.C.P.I., has been appointed Medical Attendant to the Royal Irish Constabulary, Ballieborough, co. Cavan, vice J. Clarke, L.K.Q.C.P.I. & L.M., M.R.C.S.E., L.R.C.S.Ed., resigned.

DAVIS, G., L.R.C.P.L., M.R.C.S.E., has been appointed Resident Obstetric Assistant to the Westminster Hospital, vice Horner, whose appointment has expired.

DE TATHAM, H., M.D., M.R.C.P.L., has been appointed Obstetric Physician to the Jamsetjee Jeejeebhoy Hospital, and Professor of Midwifery in the Grant Medical College, Bombay.

DICKSON, H., M.B., C.M., L.R.C.S.Ed., L.S.A.L., has been appointed Resident Surgeon and Secretary to the Worksop Dispensary.

DINWOODIE, W., M.D., C.M., has been appointed Medical Officer and Public Vaccinator for the Parish of Kirkmabreck, Kirkcudbrightshire, vice Johnston, resigned.

EDGE, J. J., L.R.C.S.I., L.K.Q.C.P.I., & L.M., has been appointed a Resident Medical Officer to St. Mary's Hospital, Manchester, to attend patients at their homes, vice Folkes, resigned to commence practice.

EDGELOW, S. H., M.R.C.S.E., has been appointed House-Surgeon to the Wrexham Infirmary and Dispensary.

GAYLOR, E., M.R.C.P.Ed., L.F.P.S.G., has been reappointed Medical Officer of Health for the Ripley Urban Sanitary District, Derbyshire, at £20 for one year.

HALDANE, D. R., M.D., F.R.C.P.Ed., has been appointed Consulting Physician to the Royal Infirmary, Edinburgh.

KEILLER, A., M.D., F.R.C.P.Ed., has been appointed Consulting Physician for the Diseases of Women to the Royal Infirmary, Edinburgh.

KENNEDY, W., L.R.C.S.I., L.A.H.D., has been appointed Senior Medical Officer to the Friendly Societies' Medical Institute, Northampton.

LAW, E., M.B., C.M., M.R.C.S.E., has been appointed House-Surgeon to the District Infirmary, Ashton-under-Lyne, vice White, resigned.

MACKAY, A., L.F.P.S.G., has been appointed Medical Officer and Public Vaccinator for the Lower District of the Parish of Colmonell, Ayrshire, vice Mack, deceased.

MILLAR, J., M.D., L.R.C.S.Ed., has been appointed Medical Officer and Public Vaccinator for the West District and the Workhouse of the Belford Union, Northumberland, vice Cunningham, resigned.

MOORE, R., M.D., C.M., has been appointed House-Surgeon and Secretary to the Scarborough Dispensary and Accident Hospital, vice Steele, resigned.

MORTON, A. S., M.B., C.M., M.R.C.S.E., F.R.C.S.Ed., has been appointed Assistant-Surgeon to the Royal South London Ophthalmic Hospital.

MORTON, J., M.B., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer of Health for the Guildford Urban Sanitary District for one year.

MURPHY, S. F., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer of Health and Examiner of Gas for the Parish of St. Pancras, at £300 per annum, vice Stevenson, resigned.

ROBERTS, T. L., M.R.C.S.E., has been appointed Medical Officer for the Alfreton District of the Belper Union, vice Siddall, resigned.

SANKEY, Dr. H. R. O., has been appointed an Assistant Medical Officer to the Warwickshire Lunatic Asylum, Hatton, vice Lilley, resigned.

SAVAGE, G. H., M.D., L.R.C.P.L., has been appointed Resident Physician and Medical Superintendent of the Royal Hospital of Bethlehem, at £700 per annum, pupils' fees, furnished residence, &c., vice Williams, appointed a Commissioner in Lunacy.

SETTLE, J., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer of Health for the Barrow-in-Furness Urban Sanitary District, at £100 per annum, vice Allison, deceased.

SHEAF, E., M.R.C.P., F.R.C.S.E., has been appointed Surgeon to the Stark Iron Mines, Barrow Hæmatite Iron and Steel Company.

SHEEHY, W. H. P., L.R.C.P.L., M.R.C.S.E., has been appointed Registrar and Chloroformist to the Evelina Hospital for Sick Children, vice Bott, resigned.

SUTHERLAND, Mr. J. A., has been appointed Assistant-Surgeon to the Leith Hospital, at £60 per annum and board, vice Purdie, resigned.

TUCHMANN, M., M.D., M.R.C.S.E., has been appointed Honorary Assistant-Surgeon to the German Hospital, Dalston.

TYNER, R. G., L.R.C.S.I., L.K.Q.C.P.I., & L.M., has been appointed Assistant Colonial Surgeon in the Ceylon Medical Service.

WILSON, G., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer of Health for the Clutton Rural Sanitary District, Somersetshire, at £120 for one year.

WILSON, W. W., M.R.C.S.E., has been appointed an Honorary Surgeon to the Ear and Throat Infirmary, Birmingham, vice Hunt, resigned.

Births, Marriages, and Deaths.

BIRTHS.

FERGUSSON.—On the 28th ult., at Tweedbrae House, Peebles, the wife of Alexander Fergusson, M.D., of a daughter.

HERON.—On the 5th inst., at Margaret-street, Cavendish-square, the wife of G. A. Heron, M.D., of a son.

MAY.—On the 31st ult., at Pentonville-road, the wife of Edward H. May, M.R.C.S.E., of a daughter.

MILLER.—On the 3rd inst., at Tay-street, Dundee, the wife of James William Miller, M.D., of a son.

SPENCER.—On the 2nd inst., at Albion-road, Stoke Newington, the wife of Edward Richard Spencer, L.R.C.P.Ed. &c., of a daughter.

TELFER.—On the 2nd inst., at Blair House, Oakley, Fifeshire, the wife of William Telfer, M.B., C.M., of a daughter.

MARRIAGES.

CARR-JACKSON—BARNES.—On the 5th inst., at St. George's, Hanover-square, by the Rev. Charles Sedley Hagreen, Vicar of Staunton-Long (cousin of the bride), assisted by the Rev. Capel Cure, Rector of the Parish, Ernest Carr-Jackson, of Harley-street, Cavendish-square, eldest son of the late Thomas Carr-Jackson, F.R.C.S., to Ada Constance Sedley, younger daughter of Robert Barnes, M.D., F.R.C.P., of Grosvenor-street, Grosvenor-square.

COCKBURN—JENKINSON.—On the 5th inst., at St. John's Church, Yealand Conyers, by the Rev. W. M. Shaw, Vicar, assisted by the Rev. Thomas Clarkson, Rector of Wyverstone, Suffolk (cousin of the bride), Jamison Cockburn, M.B., C.M., of Ulverstone, to Eliza, elder daughter of John Jenkinson, Esq., of Yealand.

SANDERSON—CRONE.—On the 22nd ult., at Penrith Church, Thomas Drummond Sanderson, M.B., to Lilly, daughter of John Crone, Esq.

SMITH—FREER.—On the 23rd ult., at Oldswinford Church, Henry Hammond Smith, L.R.C.P.L., to Ethel, daughter of R. L. Freer, Esq.

WILLMOTT—HATHWAY.—On the 3rd inst., at Weston-super-Mare, Julius John Eardley Willmott, M.B., to Annie, youngest daughter of H. Hathway, Esq., of The Ferns, Weston-super-Mare. No cards.

WOLSTON—LEAN.—On the 4th inst., at the Registrar's Office, Lambeth, Surrey, Walter Thomas Prideaux Wolston, M.B. Edin., to Mary, third daughter of the late Francis Lean, R.N. No cards.

DEATHS.

CROWLEY.—On the 21st ult., at Bandon, co. Cork, Patrick Crowley, L.F.P.S.G., aged 42.

GROVES.—On the 29th ult., at Upway, Dorsetshire, Matthias Groves, M.R.C.S.E., aged 32.

HAMILTON.—On the 28th ult., at Honor Oak Park, Forest-hill, Mark Hamilton, M.R.C.P.L., Staff-Surgeon, R.N., retired list, aged 63.

HEFFERNAN.—On the 29th ult., at Ballyvoreen, co. Limerick, James Heffernan, M.D., aged 71.

HEWARD.—On the 28th ult., at Clare, Thomas Spencer Heward, L.R.C.P.Ed., aged 64.

HILL.—On the 30th ult., at Earl's Court House, Old Brompton, Robert Gardiner Hill, L.R.C.P.Ed., aged 67.

HUNTER.—On the 20th ult., at Kilbirnie, Ayrshire, William Hunter, L.F.P.S.G., aged 53.

PARKS.—On the 3rd inst., at Bankfield, Ainsworth, James Parks, M.R.C.S.E., late of Bury, aged 65.

PENTLAND.—On the 31st ult., at Queensboro', Drogheda, Henry Pentland, M.D., of Kells, co. Meath, aged 75.

WALKER.—On the 31st ult., at Chesterfield, Hugh Eccles Walker, M.D., F.R.C.S., aged 62.

[N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages and Deaths.*]

BOOKS ETC. RECEIVED.

R. Hunt: Ure's Dictionary of Arts, Manufactures, and Mines. Vol. IV. Supplement.
B. Squire: Atlas of the Diseases of the Skin. Part I.
Dr. B. J. Jeffries: Dangers from Colour-blindness in Railroad Employés and Pilots.
Dr. Tanner: Memoranda on Poisons.
Dr. Green: Pathology and Morbid Anatomy.
Dr. C. A. Gordon: The Soldier's Manual of Sanitation.
Dr. J. P. Cassells: Sewer-gas and Ear Disease.
The Nineteenth Century. June.
The Truthseeker. June.

ST. THOMAS'S HOSPITAL.

DISTRIBUTION OF PRIZES.

THE following is a list of gentlemen who obtained prizes at the distribution held on June 7th, 1878:—

SUMMER SESSION, 1877.

FIRST-YEAR'S STUDENTS. — W. A. Duncan, College Prize £15 and Certificate of Honour; R. Heelis, College Prize £10 and Certificate of Honour; F. W. Nicholson, College Prize £5 and Certificate of Honour.

SECOND-YEAR'S STUDENTS. — A. Newsholme, College Prize £15 and Certificate of Honour; T. D. Savill, College Prize £10 and Certificate of Honour; Takaki Kanehiro, College Prize £5 and Certificate of Honour.

WINTER SESSION, 1877-78.

ENTRANCE SCIENCE SCHOLARSHIPS.—W. Wansbrough Jones, Scholarship £60 and Certificate of Honour; A. E. Wells, Scholarship £40 and Certificate of Honour.

FIRST-YEAR'S STUDENTS. — W. Wansbrough Jones, the Wm. Tite Scholarship £30 and Certificate of Honour; F. W. Stoddart, College Prize £20 and Certificate of Honour; M. Jay, College Prize £10 and Certificate of Honour; A. E. Wells, Certificate of Honour; W. Fell, Certificate of Honour.

SECOND-YEAR'S STUDENTS.—W. A. Duncan, Musgrove Scholarship £40 guineas and Certificate of Honour; H. N. Holberton, College Prize £20 and Certificate of Honour.

THIRD-YEAR'S STUDENTS.—A. Newsholme, College Scholarship 40 gs. and Certificate of Honour; A. Newsholme, College Prize £20 and Certificate of Honour; Takaki Kanehiro, College Prize £15 and Certificate of Honour.

PHYSICAL SOCIETY'S PRIZES. — For 1876-7: Hutton Castle, Third-year's Prize and Certificate of Honour; G. Gulliver, Second-year's Prize and Certificate of Honour; J. N. Stephens, First-year's Prize and Certificate of Honour. For 1877-8: T. D. Acland, Third-year's Prize and Certificate of Honour; W. A. Duncan, Second-year's Prize and Certificate of Honour; W. Wansbrough Jones, First-year's Prize and Certificate of Honour. — Anatomical Assistants (Certificates of Honour): H. Swale, Ho Kai, S. W. Sutton, R. J. Williamson, T. D. Savill.—Prosectors (Prize and Certificate of Honour): H. J. Barron, F. W. Nicholson. — Resident Accoucheurs (Certificate of Honour): C. H. H. Cameron, G. H. D. Gimlette, C. H. White, F. H. Weekes. — Solly Medal and Prize: Medal and Prize £20, C. E. Sheppard. — Surgery and Surgical Anatomy: The Cheselden Medal, founded by the late George Vaughan, Esq., W. F. Haslam.—Practical Medicine: The Mead Medal, founded by Mr. and Mrs. Newman Smith, S. J. Taylor. — House-Surgeons and Assistant House-Surgeons (Certificate of Honour): J. F. Nicholson, J. Black, F. H. Weekes, and W. H. Battle, House-Surgeons; E. L. G. Gamble, G. H. D. Gimlette, and S. A. Crick, Assistant House-Surgeons. — House-Physicians and Assistant House-Physicians (Certificate of Honour): J. A. M. Moullin, G. H. Makins, H. U. Smith, and W. Tyrrell, House-Physicians; W. Tyrrell, R. B. Bothamley, W. H. Battle, and E. H. Hare, Assistant House-Physicians. — For General Proficiency and Good Conduct; The Treasurer's Gold Medal, S. J. Taylor.

Notes, Short Comments, and Answers to Correspondents.

THE ARMY MEDICAL SERVICE.

THE Professors of the School of Physic of the University of Dublin, in reply to a recent communication from the War Office as to the average earnings under ordinary circumstances of medical practitioners in civil life, have stated that they do not possess the data necessary for such an answer. They point out that their medical graduates are entitled, from the superior education they undergo, to positions in civil practice from the outset of their career superior to the ordinary Poor-law appointments open to all registered practitioners in Ireland. They also state that if the examination for the Army Medical Service included a large element of Classics and Science, as well as of Medicine and Surgery, a better class of army medical officers would be at once secured, and all difficulty on the part of their brother officers to concede them equal privileges would disappear, in consequence of the superior education of the medical officers selected under such a system.

BEEF-TEA.

To the Editor of THE LANCET.

SIR,—As medical officer to a large metropolitan infirmary, it falls to my lot to prescribe a large amount of beef-tea to many of my patients. I am desirous of obtaining the opinion of my medical brethren—1st. As to the part of the animal most suitable for making beef-tea. 2nd. As to the quantity of meat per pint required. 3rd. As to its therapeutic value compared to good extract of meat (Liebig's).

I shall be very thankful for any suggestions your correspondents may make on the subject. Your obedient servant,

June 4th, 1878. L. R. H.

Dr. Hitchman.—The deliverance in the Court of Exchequer quoted by our correspondent confirms what we said last week. His opinion as to the power of the Council to register foreign degrees of physicians practising before 1858 is very doubtful. The point is likely to be soon superseded by clearer legislation.

Mr. Harris's letter arrived too late for insertion this week.

House-Surgeon.—The subject of muscular wasting in connexion with joint disease is treated very fully in a memoir by M. Valtat, published last year by H. B. Baillière. The author holds the view that such wasting is not due simply to the inaction necessitated by disease, because of its early appearance, and the frequency with which it persists for a long time after the joint affection has subsided.

HÆMORRHAGE WITH A CONTRACTED UTERUS.

To the Editor of THE LANCET.

SIR,—There are those who think hæmorrhage with a contracted uterus several days after delivery impossible—in fact, an anomaly. The following case occurred in my practice.

On March 11th, Mrs. B——, aged about thirty-five years, the mother of four children, sent for me at 5.30 A.M. to assist at her accouchement. Pain did not return, as heretofore, on my arrival. Examination showed the os about the size of half-a-crown. I left after waiting some time. When I called again before noon she was much the same. She was delivered at 9 P.M. the same day. The labour was easy; the offspring a healthy, natural-sized female; funis very small, thin; placenta adherent. The introduction of the hand was somewhat difficult, owing to the contraction of the cervix. The placenta was, however, easily "peeled off" by reason of the distinguishing feel of the after-birth and womb, the latter having a very cartilaginous, wall-like touch. She went on well.

March 12th.—Given carbonate of magnesia and tincture of hyoscyamus because after-pains were severe; uterus size of cricket-ball, and in natural position.

16th.—Was flooding; uterus contracted; pulse 80, and weak; temperature 99°. Says she has discharged a great deal more the last few days than she was wont formerly.

17th.—I was called at 3 A.M. She was very ill; flooding worse. I found her in a state approaching collapse; pulse scarcely perceptible. Full doses of perchloride of iron were given, and stimulants in small quantities repeated frequently. She rallied.

20th.—The woman well; the discharge normal; auscultation and percussion showed a systolic bruit and slight dilatation.

This was a well-built, big-boned, not anæmic person, of good social position, who had consulted me some time previous for what was then taken to be irritable heart (with weak, feeble action), for which she took bromide of potassium and digitalis, with bark infusion, with decided benefit. Lately she appeared in great trepidation, as her sister had died of post-partum hæmorrhage. Her health and spirits before had been moderately good. The climacteric flooding occurring the sixth day after delivery, with a hard, contracted uterus (to external manipulation) was peculiar. The case appears to bear out Dr. Arthur Farre, when he says that certain states of irritable nervous system cause an extreme contraction, unfavourable to the formation and retention of the natural plugs afforded by the coagula in the uterine sinuses. The effect of perchloride of iron was a testing therapeutic argument in favour of Dr. A. Farre. The flooding did not come on suddenly, but slowly; the womb contracted quickly and decidedly after childbirth; the pains were never very severe nor prolonged, there being some dozen the last hour and a half. Yours truly,

Ravensthorpe, May, 1878. W. T. RAMSDEN, L.R.C.P., &c.

Subscriber.—There is no obvious reason why our correspondent should not charge for his attendance. A medical student's mother is not, as such, entitled to be exempted from medical charges, and certainly ought not to be so if able to pay them.

Anxious.—We do not prescribe. Consult any registered medical practitioner.

FISTULA IN ANO.

To the Editor of THE LANCET.

SIR,—During the last five years I have had under my care several cases of fistula in ano. All but the last were subjected to the division of the sphincter ani with the knife, and, although varying considerably in the length of time required to heal the wound, made good and perfect recovery. With the last I adopted a different method. It was a complete fistula, having one opening in the bowel above the sphincter, and another (external) near the anus, whence frequently fæcal matter exuded. Having cleared the bowels thoroughly, and then secured them against disturbance for two or three days, I introduced to the bottom of the fistula in a hollow tube some pure carbolic acid in a liquid state. The first application seemed to close the internal opening; the second, introduced the same way, required a less deep insertion; the third less still, and so on till the sinus became completely closed. Two months have now elapsed. The patient has had no return of the affection, and declares himself perfectly well.

I am aware that the late Sir Wm. Fergusson, in his work on Practical Surgery, has written: "A persistence in the use of lotions, especially astringent injections, thrown into the sinus, and well regulated pressure will sometimes," &c. But I do not remember having seen anywhere directions to introduce a caustic, and, *par excellence*, carbolic acid.

If you deem the suggestion worthy of a place in THE LANCET, it may induce some others to test a method far less terrifying than the knife, and, as far as I can judge from one case, far superior to it.

Let me add that my patient was not confined to bed for a single day, but continued, throughout the treatment, his usual occupation.

I am, Sir, yours faithfully,

Islington, Liverpool, May, 1878. W. H. LAMBART, M.D., &c.

TREATMENT OF ACNE ROSACEA.

To the Editor of THE LANCET.

SIR,—Will some of my medical *confrères* kindly assist me by suggesting a line of treatment for an obstinate case of acne rosacea?

The patient is a young man, of florid complexion, aged twenty-four years, and has never had any previous disease. I have tried the preparations of arsenic, potassium, iodine, iron, zinc, &c., with little or but temporary benefit. Yours faithfully,

June 5th, 1878. A YOUNG SURGEON.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE following were the questions submitted to the candidates at the primary examination for the diploma of Fellow of the College on May 24th :—

1. State the velocity of the blood in the several parts of its course, and describe the methods by which this has been ascertained.
2. What are the essential structures of a secreting organ? Describe the several types of secreting glands. Give evidence of the direct influence of the nervous system upon secretion. Describe the poison-apparatus in ophidia.
3. Describe the course and relations of the profunda cervicis artery, and the dissection required to expose it.
4. Describe the dissection required to expose the course and distribution of the obturator nerve.

Dr. Edward T. Wilson (Westal, Cheltenham) asks us to state that he will feel greatly obliged to any of our readers who will kindly supply him with Reports of Hospitals for Infectious Disease, or any information respecting the practical working of such institutions.

Mr. J. B. Barnes.—The matter shall be considered.

THE NAVAL MEDICAL SERVICE.

To the Editor of THE LANCET.

SIR,—Just at a time when all the united energies of the different departments of the naval service may be called upon to put forth their experience gained by years of labour and study for the maintenance of the national honour, the medical alone is about to be subjected to vast and sweeping changes—changes so momentous that the whole fabric of the medical administration of the right arm of the country may be thereby gravely imperilled, if not paralysed.

The office of Director-General, it is rumoured, is to be abolished; captains and lieutenants are once more to occupy the much-coveted sinecure appointments, from which they were ousted eight years ago as being then considered unnecessary, in the naval establishments at Portsmouth and Plymouth, and for the loss of which those officers at the time were amply recompensed.

I am not prepared to go into the details of the why and wherefore of these radical changes, or even speculate upon the cause that induced the new First Lord to adopt such measures; but one thing I must say, that not I only, but one and all of the numerous brother officers with whom I come in daily contact are loud in their expressions of disapprobation—nay, indignation—at the course about to be pursued. And what do they propose in lieu of Director-General? A Medical Board, where unanimity would never reign—the old fable of the "body and its members" without a guiding power.

For eight years the working of the large naval hospitals I have mentioned has been carried on, at least so far as I know, without a hitch. If mal-administration occurs on board ship, if any charge be made against any officer, so surely will an inquiry be made, and the defendant acquitted, or, if found guilty, punished according to his deserts. No such charge has at least been made officially, and certainly no inquiry taken place; yet the punishment has been awarded, for punishment I must consider it, when a junior post captain, say a man of five and-thirty, totally ignorant of medical administration, turns out an Inspector-General, ranking with a Rear Admiral, from his quarters, and assumes lordly sway as if on quarter-deck. Judging from past times, those officers who are considered unfit for, or incapable of, commanding one of Her Majesty's ships, will be the most likely to be selected; and lieutenants, whose age &c. preclude chance of promotion, may, if favourites, be installed to do the honourable duty now efficiently performed by a common labourer. I do not use this latter term hastily, for it is an authentic fact.

Anyone reading over the old obsolete instructions for home hospitals may see with little trouble the retrograde step about to be taken. It is enough on board ship that a senior fleet surgeon should ask leave, as often is the case, from a midshipman, without compelling an officer ranking with a Rear Admiral to hunt up a lieutenant, and inform him he is leaving the precincts of the hospital.

You, Sir, with the vast publicity you can give to these facts, and the world-wide influence you possess over the members of our profession, may through the latter, still at the eleventh hour, avert these fatal changes.

Yours &c.,
May, 1878. MEDICUS, R.N.

Dr. Alexander McCook Weir is thanked for his able letter on the subject of "Vaccination Reform"; but we regret that great pressure on our space renders it impossible for us to print it.

THE TITLE OF "DOCTOR" AND THE EDINBURGH COLLEGE OF PHYSICIANS.

To the Editor of THE LANCET.

SIR,—In reply to inquiries made by myself about twelve months since, the Royal College of Physicians of Edinburgh informed me that it did not encourage even its Fellows and Members to assume the title of "doctor," as such title belonged legally to those *alone* who had obtained the degree of M.D.

Yours &c.,
June, 1878. M.D., M.R.C.P.E., &c.

Senex.—The answer to the general question will be found among our annotations. But may not the disease in this case be hereditary?

Inquirens.—Such an institution, we believe, exists, or is contemplated.

"WANTED, A DIAGNOSIS."

To the Editor of THE LANCET.

SIR,—As no one seems to have cared to answer the question put by "Puzzled" in THE LANCET of May 4th, I venture to hazard a diagnosis. I should call the case one of general atrophy, for which cod-liver oil is the proper remedy, or (better still?) the "hydrated oil" sold by most chemists.

Your obedient servant,
Cairo, May 20th, 1878. HERBERT KIERNANDER, L.R.C.S. Ed.

LARYNGISMUS STRIDULUS.

To the Editor of THE LANCET.

SIR,—In your last number Mr. W. Pugin Thornton requests me to inform him through your columns whether I have "found the plan of giving hydrate of chloral in cases of laryngismus stridulus available during an attack, or whether the violent and spasmodic respiratory efforts of children do not forbid any attempt at using the drug until after the spasms have ceased?"

To this question I would reply that the attack of laryngeal spasm in this affection lasts only from half a minute to one or, at most, two minutes; that during the whole of this short period the child is making a frantic effort to effect an inspiration, which from the closure of the larynx by the spasm it is unable to do until the spasmodic action gives way, when the child is to all appearance well again until the occurrence of the next attack; that as a consequence of this condition it is quite impossible to administer anything by the mouth, and if the drug could be so administered, the spasm would either have relaxed or the child be dead long before it could be absorbed so as to produce any effect.

I administer the drug in a certain sense as a prophylactic against future attacks, and as these come on at irregular and uncertain intervals, usually several times during the course of a day, I give the chloral hydrate three times a day in *such doses as will produce and keep up a slightly but distinctly increased somnolent effect*, believing that when the nervous system is kept to this extent continually under the influence of the drug, the spasmodic habit is during that time interrupted, and after a certain period of quietude or freedom from the morbid action it ceases, or, as I sometimes say, forgets to return.

With regard to the injections of morphia suggested by Mr. Thornton, I assume he means hypodermic injections, as he says immediately after that they have been tried by Dr. Lancereaux and Sir Rose Cormack. Hypodermic injections of such a dangerous drug as morphia in the case of infants could only be applied by a medical attendant; and as no one can tell at what time the spasm may appear in laryngismus stridulus, and as it lasts for such a very short period, the child would either be well or suffocated long before the physician could appear upon the scene. If Mr. Thornton means injections per rectum during the spasm, the same objection would hold good; the attack would probably be over before the enema could be used, certainly before any of the injection could be absorbed. We must, therefore, anticipate the spasm, and try to produce a condition of the nervous system in which the morbid excitability of the nerve specially involved in producing the spasm is lessened, if not entirely removed. This condition is, in my experience, produced by doses of chloral hydrate at short intervals.

In reply to Mr. Thornton's second question, the female patient who suffered from an incessant "spasmodic barking cough" was quite *unable* to sleep on account of the cough until she got the chloral hydrate. I have seen such an hysterical case as Mr. Thornton seems to have in his mind when he says that he is "inclined to think that this was a case of hysteria, and not one of acute laryngitis"; but when I state, besides the incessant "spasmodic barking cough," that the attack supervened upon a distinct exposure to cold in the snow, and had all the well-known pyrexial symptoms of an acute inflammatory attack, combined with the complete absence of any of the other phenomena usually present in hysterical subjects, I think he will agree with me in my diagnosis, that the affection was a case of acute laryngitis, and not one of hysteria.

I am, Sir, yours obediently,
Barnsley, June 3rd, 1878. WM. STEWART.

To the Editor of THE LANCET.

SIR,—In your issue of the 25th ult. Mr. William Stewart writes: "No allusion, so far as I know, has hitherto been made to the beneficial effect of chloral hydrate in laryngismus stridulus." He may therefore be interested to learn that in the *British Medical Journal* for May 23rd, 1874, Dr. George Johnson wrote as follows: "Chloral hydrate in repeated small doses—one grain for a child a year old, and an additional grain for every additional year of the child's age—is the best drug remedy for laryngismus stridulus." Dr. Wood, in his admirable "Treatise on Therapeutics," quotes Dr. Rhen, "Jahrbuch für Kinderkrankheiten, 1871," as an authority for the use of chloral hydrate in the same disease.

These two remarks I have come across quite accidentally since reading Mr. Stewart's instructive communication, and have been induced to forward them for publication, thinking that this additional weight of evidence would tend to promote the use of so admirable a remedy as chloral hydrate is in cases of laryngeal spasm, whether occurring in children or adults.

Faithfully yours,
Queen Anne-street, W., June 1st, 1878. F. DE HAVILLAND HALL.

To the Editor of THE LANCET.

SIR,—I quite agree with Mr. Wm. Stewart's observations in your journal of May 25th on the use of chloral hydrate in laryngismus stridulus; but I have found that a combination of bromide of potassium and chloral is more efficacious in that disease than chloral alone.

There is one complication of this disease which I do not remember to have seen mentioned in any book on the subject, and that is, that in a certain number of cases there is ulceration of the dorsum of the tongue far back. My own experience, gained not only in private practice, but whilst connected with the Children's Hospital in Manchester, leads me to suspect that this ulceration, or at least chronic inflammation about the epiglottis or larynx, is frequently as much a cause as a complication of the attacks, as I have found that painting the front of the throat with tincture of iodine has often quickly lessened the spasms when other treatment has failed. So marked has the effect been that in several cases the mothers of the patients have spontaneously remarked that the attacks had lessened ever since the painting was commenced. I should be pleased to know, through your columns, if any others of your readers have met with this complication.

Yours truly,
Sale, Cheshire, June 3rd, 1878. W. ALFRED RENSHAW, M.D.

A Second-year's Man.—Surely the managers of the school can bring sufficient pressure to bear on the master of the workhouse to prevent such a line of conduct as our correspondent describes. They are bound to do this, or adopt some other course by which the school can be adequately supplied.

Finsbury Park.—There can be no question as to the illegality of such an "assumption of medical titles" as is involved in medical men styling themselves "doctor" on the ground of qualifications "M.R.C.S.E." and "L.S.A."

Nerve.—We have no knowledge of the letter.

MEDICAL EVIDENCE.

To the Editor of THE LANCET.

SIR,—Public attention has again been aroused, from the apparently unsatisfactory conclusion of the Dodwell case, to the conditions under which medical evidence is presented and received in courts of law. We do not attribute blame so much to the medical gentlemen whom we meet as witnesses as to the system which is becoming established. Medical evidence savours too much of the special pleading and rhetorical artifice of the advocate. It is essential to the medical witness to "make a point," and, so far as in his power lies, to damage the evidence of his professional opponent. Most important questions, sometimes involving the issues of life and death, are now and then practically referred to the arbitrament of a medical tribunal. "Doctors differ," and uncomfortable qualms are aroused in the public mind whether decisions so arrived at are compatible with the public safety; whether a man can be deprived during his natural life of his liberty on the mere *ipse dixit* of a medical expert. That such a consummation is improbable, but possible, cannot be denied, and under our present system the possibility comes dangerously within the range of probability. A court of medical men of known reputation, consisting (say) of three, established on lines somewhat similar to those on which the Royal Commissioners exercise their function, should be appointed, and to them all purely medical evidence as regards sanity, post-mortem wounds, &c. &c., should be referred. A report should be prepared by them at the trial, and such report should be taken as evidence. This is the merest sketch of a court not even yet existing in embryo; but I should like to see our courts of law assisted and guided by some such authority. I feel sure that men commanding the respect of the public, and, what is a more difficult matter, of the members of the medical profession, could be secured, and the present scandal of uncertainty in matters in which medical evidence is bound up would to a great extent, if not entirely, be removed.

Your obedient servant,

Pump-court, Temple, May, 1878. A. M. TARLETON.

COMMUNICATIONS not noticed in the current number shall receive attention in our issue of the ensuing week.

COMMUNICATIONS, LETTERS, &c., have been received from—Mr. J. Croft, London; Dr. Yeo, London; Mr. Maunder, London; Mr. Geo. Lawson, London; Dr. de Havilland Hall, London; Mr. Edgelow, Teignmouth; Mr. Lowther, Hull; Mr. Mason, London; Dr. Nicholls, Chelmsford; Mr. Roxburgh, Glasgow; Dr. Weir, Leicester; Mr. Dickson, Buxton; Mr. Thomas, Narberth; Dr. Tuke, London; Mr. Kennedy, Northampton; Mr. Tebb, London; Dr. Renshaw, Sale; Mr. Wolstencroft, London; Dr. Elliot, Carlisle; Dr. Russel, Lancaster; Dr. Coleman, Surbiton; Mr. Stewart, Barnsley; Mr. Hay, Partick; Dr. Strange, Worcester; Dr. Bigelow, Boston, U.S.A.; Mr. Coppinger, Dublin; Mr. Kiernander, Laira; Surgeon-Major White, Meerut; Dr. Goyder, Bradford; Mr. F. G. Larkin, London; Dr. Adamson, Hetton-le-Hole; Mr. Black, Green-lanes; Mr. Todd, North-Petherton; Mr. Townsend, Exeter; Dr. Gardner, Adelaide; Mr. Colson, Dhulia; Dr. de Tatham, Bombay; Mr. Hobson, Newcastle-on-Tyne; Dr. Gourley, Drogheda; Mr. Lymott, Sowerby Bridge; Dr. Hitchman, Liverpool; Mr. Wilson; Dr. Brookfield; Mr. Streeter; Dr. Tyner, Devizes; Dr. Greene, Dorchester, U.S.A.; Dr. Atthill, Dublin; Dr. Sheaf, Barrow-in-Furness; Messrs. Edge and Co.; Dr. Tyson, Folkestone; Mr. Bartleet, Birmingham; Dr. Harries, Aberystwith; Mr. Hannah, Ashton; Mr. Shearer; Dr. Skrimshire; Mr. Tuck, Landport; Mr. Wainwright, Liverpool; Dr. Pratt, Newtown; Mr. Vavasour; Dr. Aldridge, Dorchester; Mr. Bond; Dr. Medlicott, Wells; Mr. Smale; Mr. Garner; The Secretary of the Faculty of Physicians, Glasgow; Cosmopolite; M.R.C.S., Dublin; Æneas; Nerve; Medicus; Poupart; A. G.; M.D.; F.R.C.S. Eng.; L. R. H.; A Young Surgeon; Alpha, Axminster; X. Y. Z.; Medico; M.D., M.R.C.S.E.; The Registrar-General of Edinburgh; A Subscriber; J. R.; A Second-year's Man; &c. &c..

LETTERS, *each with enclosure*, are also acknowledged from — Mr. Little, Reading; Mr. Duke, Wells; Dr. Deane, Blenheim, New Zealand; Mr. Shortridge, Honiton; Mr. Butterfield, Northampton; Mr. Roberts, Barnoldswick; Dr. Muscroft, Pontefract; Mr. Macnamara; Mr. Ives, Halstead; Mr. Davies, Northampton; Mr. Hyde; Mr. A. B. Squire; Mr. Ayres; Dr. Beadle; Mr. Dale; Mr. Kennedy; Mr. Shoolbred; Mr. Cox; Dr. Duke; Dr. Cockburn; Mr. Clement; Mr. Rayner; G. H. W., Chislehurst; Medicus No. 2; Xerxes; F. B., Finsbury; W. F., Durham; J. W., Derby; Alpha, Leeds; J. W., York; X. Y. Z.; Delta; M.D.; Medicus, Gravesend; B. B. B.; T., Leicester; S. W., Brixton; B. A., Dublin; O. P.; W. S., Aberdare; S. C., Sheffield; Medicus, Nottingham; W. H. H.; Medicus, Kingston-on-Thames; A. H.; Medicus, Manchester; Paratus; W. A. W.; Medicus, Tring.

South Wales Daily News, Animal World, Lincolnshire Chronicle, Bucks Advertiser, Mansfield and North Notts Advertiser, Croydon Guardian, &c., have been received.

METEOROLOGICAL READINGS.

(Taken daily at 8 a.m. by Steward's Instruments.)

THE LANCET OFFICE, JUNE 6TH, 1878.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Wet Bulb	Dry Bulb	Solar Radia in Vacuo	Max. Temp Shade	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
May 31	30·04	E.	50	55	95	67	45	..	Cloudy
June 1	30·00	E.	52	55	85	60	51	..	Overcast
,, 2	30·07	S.E.	51	56	93	64	46	..	Cloudy
,, 3	29·97	E.	54	55	95	70	52	..	Overcast
,, 4	29·79	S.W.	57	58	107	70	52	0·61	Cloudy
,, 5	30·06	N.E.	50	53	74	59	50	0·12	Overcast
,, 6	30·24	W.	51	53	99	70	49	0·01	Cloudy

Medical Diary for the ensuing Week.

Monday, June 10.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS. — Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
ST. MARK'S HOSPITAL.—Operations, 9 A.M. and 2 P.M.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Professor T. Spencer Wells, "On the Diagnosis and Surgical Treatment of Abdominal Tumours."

Tuesday, June 11.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.
ROYAL INSTITUTION.—3 P.M. Rev. W. H. Dallinger, "On Researches in Minute and Low Forms of Life."
ANTHROPOLOGICAL INSTITUTE OF GREAT BRITAIN AND IRELAND.—8 P.M.

Wednesday, June 12.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
ST. BARTHOLOMEW'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.
KING'S COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at 1 P.M.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at the same hour.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN. — Operations, 2½ P.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Professor T. Spencer Wells, "On the Diagnosis and Surgical Treatment of Abdominal Tumours."
EPIDEMIOLOGICAL SOCIETY. — 8 P.M. Dr. M'Combie, "On the Comparison of Small-pox Statistics, Epidemics of 1871 and 1877."

Thursday, June 13.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL. — Operations, 2 P.M., and on Friday at the same hour.
ROYAL INSTITUTION.—3 P.M. Professor Guthrie, "On Molecular Physics."

Friday, June 14.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Professor T. Spencer Wells, "On the Diagnosis and Surgical Treatment of Abdominal Tumours."
ROYAL INSTITUTION.—3 P.M. Weekly Meeting.—9 P.M. Professor Dewar, "On Liquefaction of Gases."
QUEKETT MICROSCOPICAL CLUB.—8 P.M.

Saturday, June 15.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Professor H. Morley, "On Joseph Addison."

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